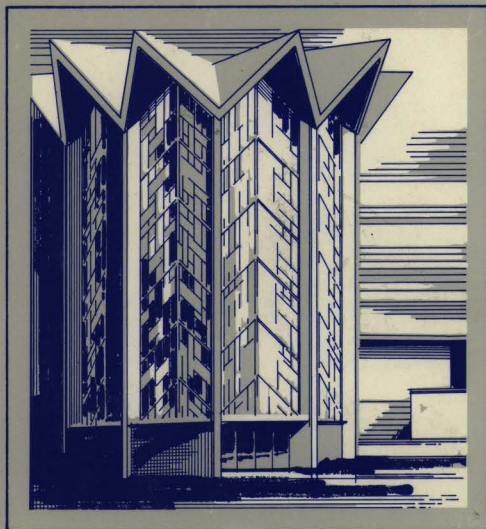


Valparaiso University

BULLETIN



GENERAL CATALOG 1986-87

VALPARAISO UNIVERSITY

Location

Valparaiso, Indiana—Population 22,000
45 Miles Southeast of Chicago; 13 Miles South of Lake Michigan

Campus Size

310 Acres, 70 Buildings

Control

Independent

Religious Affiliation

Lutheran

Major Academic Divisions

(Approximate Enrollments, Fall 1985)

College of Arts and Sciences—1780

Christ College (Honors)—190

College of Business Administration—600

College of Engineering—450

College of Nursing—380

Law School—360

Graduate Division—300 Part-time

Accreditation

The North Central Association of Colleges and Schools (All Programs)

National Council for Accreditation of Teacher Education

National Association of Schools of Music

The Council on Social Work Education

The Accreditation Board for Engineering and Technology

Indiana State Board of Nurses' Registration and Nursing Education

The National League for Nursing

The Association of American Law Schools

The American Bar Association

Indiana State Department of Education

Major Affiliations

The American Council on Education

The American School of Classical Studies at Athens

The Association of American Colleges

The Lutheran Education Association

The American Association of Colleges of Nursing

The American Society for Engineering Education

The American Assembly of Collegiate Schools of Business

The American Schools of Oriental Research

The Center for Research Libraries

Valparaiso University Information Operator—Call 219/464-5000

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ANNOUNCEMENTS FOR 1986-1987 SESSIONS

VALPARAISO UNIVERSITY BULLETIN (USPS 656-460)

Volume 60, July 1, 1986, Number 1

The General Catalog of Valparaiso University is designed to describe the programs of the University and to give that information needed to guide students in the successful achievement of their academic goals. Nevertheless, the material is for information only and does not make a contract between the student and the University. The student himself is ultimately responsible for completion of the requirements for his degree as well as for the value he receives from University programs.

In years when the General Catalog is not published an Announcement Bulletin gives information on important changes in courses, calendar, staff, program and policies.

Separate catalogs are issued for the School of Law, the Graduate Division and the Summer Session, which should be consulted for details about the related programs.

It is the policy of Valparaiso University not to discriminate on the basis of sex, race, color, handicap, age, veteran status or national or ethnic origin in its educational programs, admission policies, employment policies, financial aid or other school-administered programs. This policy is enforced by federal law under Title IX of the Education Amendments of 1972, Title VI of the Civil Rights Act of 1964 and Section 504 of the Rehabilitation Act of 1973. Inquiries concerning the application of said federal regulations to this University may be referred to the University Compliance Director of Affirmative Action Plan.

Valparaiso University is authorized under federal law to enroll non-immigrant alien students.

UNIVERSITY CALENDAR FOR 1986-1987

For the Colleges of Arts and Sciences, Business Administration, Engineering and Nursing. For the Law School, consult the Law School Bulletin.

1986

MINI SUMMER SESSION

May 19-June 12.

REGULAR SUMMER SESSION

June 16, Monday, 7:30 a.m.; 1:00 p.m. Instruction begins. Late registration.

July 4, Friday. No classes.

August 6, Wednesday, 5:00 p.m. Summer Session closes.

August 8, Friday, noon. Deadline for all grades.

FALL SEMESTER

August 23, Saturday, 8:00 a.m. Orientation for freshmen begins.

August 25-26, Monday and Tuesday, 8:00 a.m. Registration Confirmation.

August 26, Tuesday, 8:00 a.m. Registration for freshmen, transfer students, former students and students who did not participate in last spring's advance registration.

August 27, Wednesday, 8:00 a.m. Instruction begins.

August 27-October 17. Dates for first half short courses.

September 2, Tuesday, 5:00 p.m. Deadline for adding first half short courses.

September 2, Tuesday, 5:00 p.m. Deadline for late registration for fall semester.

September 4, Thursday, 5:00 p.m. Deadline for adding regular courses. All requests for adding a course during the official drop-add period (first seven class days) shall remain at the discretion of the appropriate academic dean or department chair.

September 12, Friday, 5:00 p.m. Deadline to file for S/U grade for first half short courses.

September 16, Tuesday, 5:00 p.m. Deadline for withdrawing from first half short courses with grade of W.

September 26, Friday, 5:00 p.m. Deadline to file for S/U grade for regular courses.

October 4, Saturday. Homecoming day.

October 10-October 16. Adjustment period for adding second half short courses and for arranging course intensification.

October 15, Wednesday. Last day to file application of candidacy for the associate's and bachelor's degrees to be conferred in May or August, 1987.

October 17, Friday. Free day. No classes.

October 20-December 12. Dates for second half short courses.

October 24, Friday, 5:00 p.m. Deadline for adding second half short courses.

October 28, Tuesday, 5:00 p.m. Deadline for withdrawing from regular courses with grade of W.

October 31, Friday, 5:00 p.m. Deadline to file for S/U grade for second half short courses.

November 7, Friday, 5:00 p.m. Deadline for withdrawing from second half short courses with grade of W.

November 11-November 20. Advance registration for Spring Semester, 1987.

November 21, Friday, 6:30 p.m. Thanksgiving recess begins.

December 1, Monday, 8:00 a.m. Thanksgiving recess ends.

December 6, Saturday. Last day for tests in courses of 3 credits or more.

December 12, Friday, 5:00 p.m. Deadline to officially withdraw from the University for Fall Semester.

December 12, Friday, 6:00 p.m. Instruction ends.

December 13, Saturday. Reading day.

December 15, Monday, 8:00 a.m. Final examinations begin.

December 19, Friday, 12:30 p.m. Final examinations end. Semester ends.

December 22, Monday, 12:00 Noon. Deadline for reporting all grades.

1987

SPRING SEMESTER

January 5, Monday. Orientation for new students; registration confirmation.

January 6, Tuesday, 8:00 a.m. Registration confirmation; registration for all new students, former students and students who did not participate in last fall's advance registration.

January 7, Wednesday, 8:00 a.m. Instruction begins.

January 7-February 26. Dates for first half short courses.

January 13, Tuesday, 5:00 p.m. Deadline for adding first half short courses.

January 13, Tuesday, 5:00 p.m. Deadline for late registration for spring semester.

January 15, Thursday, 5:00 p.m. Deadline for adding regular courses. All requests for adding a course during the official drop-add period (first seven class days) shall remain at the discretion of the appropriate academic dean or department chair.

January 23, Friday, 5:00 p.m. Deadline to file for S/U grade for first half short courses.

January 27, Tuesday, 5:00 p.m. Deadline for withdrawing from first half short courses with grade of W.

February 6, Friday, 5:00 p.m. Deadline to file for S/U grade for regular courses.

February 20-February 26. Adjustment period for adding second half short courses and for arranging course intensification.

February 27-May 5: Dates for second half short courses.

February 27, Friday, 6:30 p.m. Spring recess begins.

March 16, Monday, 8:00 a.m. Spring recess ends.

March 19, Thursday, 5:00 p.m. Deadline for adding second half short courses.

March 24, Tuesday, 5:00 p.m. Deadline for withdrawing from regular courses with grade of W.

March 30, Monday, 5:00 p.m. Deadline to file for S/U grade for second half short courses.

April 2, Thursday, 5:00 p.m. Deadline for withdrawing from second half short courses with grade of W.

April 15, Wednesday. Last day to file application of candidacy for the associate's and bachelor's degrees to be conferred in December, 1987.

April 17, Good Friday. No classes.

April 20-April 28. Advance registration for Fall Semester, 1987.

April 29, Wednesday. Last day for tests in courses of 3 credits or more.

May 5, Tuesday, 5:00 p.m. Deadline to officially withdraw from the University for Spring Semester.

May 5, Tuesday, 10:00 p.m. Instruction ends.

May 6, Wednesday. Reading day.

May 7, Thursday, 8:00 a.m. Final examinations begin.

May 12, Tuesday, 12:30 p.m. Final examinations end. Semester ends.

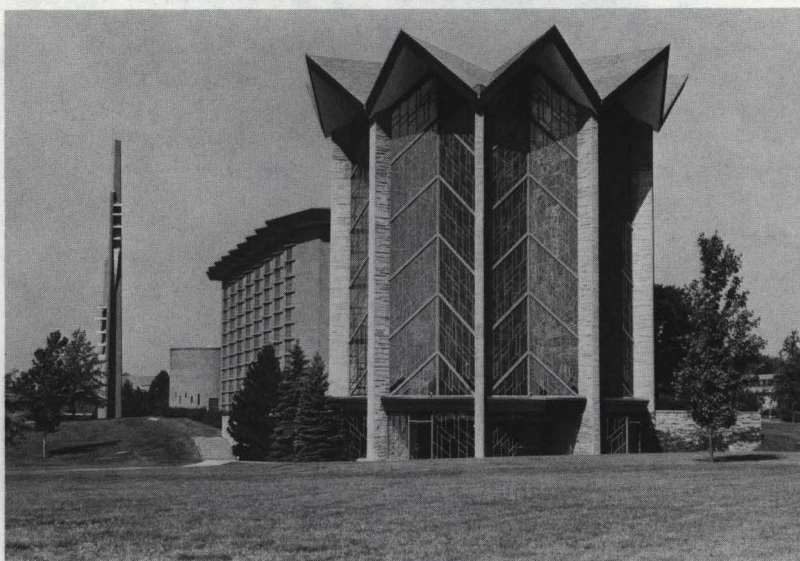
May 13, Wednesday, noon. Deadline for grades for all candidates for all degrees.

May 15, Friday, 5:00 p.m. Deadline for reporting all other grades.

May 17, Sunday. 113th Annual Commencement.

Certain other dates are observed annually by the University: Reformation Day, Ash Wednesday, and Ascension Day.

VALPARAISO IN BRIEF



Chapel of the Resurrection

The Aims of the University

Valparaiso University is dedicated to superior teaching based on excellent scholarship. As a scholarly community it actively engages in the exploration, transmission and enlargement not only of knowledge but also of the cultural and religious heritage of mankind, and it is proud to prepare men and women for professional service. This community values respect for learning and truth, for human dignity, for freedom from ignorance and prejudice, and for a critically inquiring spirit. The University aims to develop in its members these values, together with a sense of vocation and social responsibility. It holds that these values receive their deepest meaning and strength within the context of the Christian faith.

As a church-related university concerned for the needs of its students in all aspects of their development as well as for the problems which face society, it aims to graduate informed and sensitive men and women who will not only leave their marks on society but find lives of personal fulfillment as well. Proud of all its alumni who have carried its values into leadership roles in their communities, the church, social institutions and the nation, it aims to continue graduating such potential leaders.

Under neither the control nor the authority of any church body, the University is an independent institution owned and operated by The Lutheran University Association. For more than half a century the University has been affiliated with congregations and members of The Lutheran Church-Missouri Synod. It enjoys, too, a partner relationship with members of all Lutheran churches, with all its constituents who share its aims and voluntarily support it, and with the communities of Northwest Indiana.

A Distinctive Institution

All American colleges and universities bear a family resemblance to one another as they come from a common set of ancestors in Europe and colonial America. Within that larger family, Valparaiso University belongs to a small and distinctive group. It is neither a large research university nor a small liberal arts college. At the same time that it promotes a basic liberal arts curriculum, it features strong undergraduate colleges of Engineering, Nursing and Business Administration, a professional direction lacking in the conventional liberal arts college. Conversely, the University is not a cluster of professional colleges which merely pays lip service to the liberal arts. Education in the liberal arts is the foundation of every academic program, and the College of Arts and Sciences, the largest unit in the University, carries on many vital programs of its own.

This combination of liberal and professional studies of such variety within an institution of modest size is rare in American higher education. Broad enough in curriculum and in variety of programs to be a university, still Valparaiso University emphasizes undergraduate teaching in the manner of the traditional small college, with many small classes and strong individual guidance. While the University focuses on undergraduate education, it maintains a modest graduate program for part-time students as well as a fine law school of 350 students. The full-time student population is around 3700, with over 4000 served annually.

Faith and Learning

The University's concern for the personal and intellectual development of each student is rooted in its Lutheran heritage. This Christian philosophy of education guides both the design of its curriculum and the approach to learning that it fosters. Beyond the courses in theology which the curriculum provides, the University emphasizes a Christian freedom which liberates the scholar to explore any idea and theory, a vocation freely uniting faith and intellectual honesty. In its residential life the University leads students to accept personal responsibility for their development and encourages a sense of caring for one another. Standing together at the center of the campus, the Chapel of the Resurrection and Moellering Memorial Library express the University's belief in the creative relationship between faith and learning. The University's motto, too, points up this relationship: "*In luce tua videmus lucem*," "In Thy light we see light."

The Chapel is the focal point for worship, the proclamation of the Gospel and many cultural events. Both Sunday and daily services bring together members of the University community who choose to worship together. Students and professional Chapel staff offer a broad and creative ministry to the whole community. As the University welcomes students of varied denominations and religious traditions, so it welcomes the involvement of community churches in those students' lives. A Roman Catholic student center, for example, is located next to the campus, and some churches of other denominations offer transportation to their services in the town.

The Setting of the University

The spacious campus of 310 acres contains more than seventy academic and residential buildings, many of them built within the past two decades. The campus is located in the small city of Valparaiso, attractively situated in a rural setting at the edge of the busy industrial district of Northwest Indiana. Fifteen miles to the north, on the shore of Lake Michigan, are the Indiana Dunes. The city of Chicago with its vast cultural resources, an hour's drive from the campus, can be reached easily by train and bus. The University often charts buses so that students and faculty can take advantage of the theatres, museums and other educational benefits of this great city. Many programs of the University use the region—rich in natural, urban and industrial opportunities for field trips and investigative activities.

An Unusual History

In its 127 year history, the University has passed through three distinct phases. Begun by Methodists in 1859 as an institution pioneering in coeducation, the Valparaiso Male and Female College was forced by the reverses of the Civil War to close its doors in 1871. It was revived in 1873 by an enterprising educator, Henry Baker Brown, as the Northern Indiana Normal School. "Mr. Brown's School," a flourishing private, proprietary institution, was renamed Valparaiso College in 1900 and rechartered as Valparaiso University in 1907. During the next twenty years, it won national recognition as a low-cost, no-frills institution of higher learning which served thousands of students who might not otherwise have been able to afford a good education. Many alumni from this period achieved distinction in their fields as governors, legislators, scientists, business leaders and other professionals. However, after World War I the University went into decline and bankruptcy; then, in 1925, The Lutheran University Association purchased it, beginning the modern phase of the University's history. The Association, an Indiana Corporation composed of men and women affiliated largely with The Lutheran Church-Missouri Synod, is an independent organization actively promoting higher education in the Christian context.

Profile of Students and Faculty

The heart of an academic institution is its students and faculty. Valparaiso University's student body is selected from a large number of applicants from all states in the nation and from many foreign countries. Unlike most American colleges, which draw the majority of their students from their immediate location, Valparaiso enrolls only about 30 per cent of its students from Indiana; another 50 per cent come from the other states surrounding the Great Lakes. Major contingents come, too, from both East and West coasts. National and diverse in its student body, the University is still a distinctively Midwestern institution which enjoys the friendliness and hard work characteristic of the region. 60 per cent of the students come from the upper fifth of their high school graduating classes. Over fifty National Merit Scholars enroll at the University in any given year, a figure which places Valparaiso University in the upper 4 per cent of the nation's schools in such enrollment.

A rich diversity characterizes the University faculty (about 250 full-time and 50 part-time professors), but they share important skills and attitudes as well.

Educated at leading research universities, they are competent in their fields. They care about students, an attitude made visible by the frequent individual consultations they invite. Above all, they enjoy teaching and believe that their work enriches not only their students' but their own lives. At Valparaiso University there are no teaching assistants; senior faculty members and newcomers alike can be found teaching introductory and advanced courses. The University embodies in its faculty an ideal of the teacher-scholar, one who recognizes that teaching is based on continuing scholarship. Many members of the faculty have achieved significant reputations in their particular fields and are pursuing, with marked success, grants from government and private foundations to promote research and improve instruction. In addition to *The Cresset*, a monthly review of literature, the arts and public affairs, published by the University, faculty edit from the campus two other national learned journals.

University governance, too, reflects campus-wide involvement. Through the University Senate, composed of faculty, students and administrators, students share in the development of University policy, including academic programs. Final responsibility for all academic programs, especially those which require certification, is vested in the faculty.

The modest size of the University, its organization into six small colleges, and especially the strong personal commitment of the faculty enhance its teaching effectiveness. In a school like this, with its concentrated residential focus and the immediate relationships it fosters between faculty and students, educational life is more vital and more intense than would be possible at massive institutions or at commuter colleges. Valparaiso University consciously fosters this tradition in the selection of both its students and its faculty and in the development of its educational programs.



Guild Hall

ACADEMIC PROGRAMS



Neils Science Center

The Goals of Education at Valparaiso

While appreciating the importance of preparing students for useful careers, Valparaiso University holds to the ideal that its students want an education which treats them first as human beings rather than simply as future wage earners. These students want to think clearly, to analyze facts and ideas, to draw sound conclusions from their reasoning and to express themselves clearly and creatively. They want to understand their cultural and religious heritage, developing a sensitivity to the culture and the viewpoints of others while at the same time finding for themselves firm values and standards by which to live and make judgments. They want to become humane and responsible citizens in an ever changing society and to participate effectively in their institutions and communities.

There is no simple formula for acquiring these abilities. Every degree program at Valparaiso aims to assist students to attain these goals by offering a course of studies in general education which provides students with a broad base of knowledge and abilities, as well as in a particular area

which leads to the mastery of concepts and tools of a single field of study. Both components, general education and the major field of studies, develop abilities in the student which go far beyond mere career preparation and provide intellectual enrichment for a lifetime.

Degrees

Associate in Science
Bachelor of Arts
Bachelor of Music
Bachelor of Music Education
Bachelor of Science
Bachelor of Science in Education
Bachelor of Science in Fine Arts
Bachelor of Science in Home Economics
Bachelor of Science in Physical Education
Bachelor of Social Work
Bachelor of Science in Accounting
Bachelor of Science in Business
Administration
Bachelor of Science in Civil Engineering
Bachelor of Science in Computer
Engineering
Bachelor of Science in Electrical
Engineering

Bachelor of Science in Mechanical Engineering
Bachelor of Science in Nursing
Juris Doctor
Master of Arts in Applied Behavioral Science
Master of Arts in Liberal Studies
Master of Education
Master of Music

Requirements and Flexibility

Each degree entails a set of requirements which are specified at appropriate places in this bulletin. These requirements are designed to give structure to each student's education while affording the greatest possible freedom to design an individual academic program. Elsewhere in this bulletin are descriptions of a number of ways by which the University encourages further flexibility and individuality.

An Overview of the General Education Requirements at Valparaiso

These requirements vary somewhat in different degree programs, particularly in the professional colleges. These variations are described in the more detailed presentation of degree requirements elsewhere in this bulletin.

- 1. Freshman Studies** (taken during the freshman year)
 - Freshman Seminar
 - Introduction to Christian Theology
 - Exposition and Argument
 - History of Western Thought and Society
- 2. Academic Area Studies** (taken largely in the sophomore year, though some may be taken in the freshman year, others in the junior year. These are selected from a large number of offerings.)
 - Theology, two courses
 - Literature and Fine Arts, two courses
 - Philosophical and Historical Studies, one course
 - Studies in Social Analysis, two courses
 - Studies in Natural Science and Mathematics, three courses
 - Non-Western or Third World Studies, one course

Foreign Languages, variable requirement
Physical Education, two credit hours (three courses)

3. Integrative Study

A single University Course, one of a number of courses designed to encourage students to confront contemporary issues, applying knowledge and skills acquired in earlier stages of their learning. (Not open to freshmen and sophomores.)

Summary of the Academic Fields of Study at the University

Most of the fields of study listed below are available as majors and minors or as interdisciplinary programs. A few are available only as minors. Some fields offer further specialized concentrations within the major itself. The index of this Bulletin indicates the location for further information regarding these programs.

The College of Arts and Sciences:

Advertising/Public Relations
American Studies
Art
Biology
British Studies
Broadcast Journalism
Chemistry
Classics
Communicative Disorders
Computer Science
Criminal Justice
East Asian Studies
Economics
Elementary Education
English
Film Studies
French
Geography
Geology
German
Greek
Hebrew
History
Home Economics
International Economics and Cultural Affairs
Latin
Mathematics
Music
Music Enterprises
Philosophy
Physical Education
Physics
Political Science
Print Journalism
Psychology
Secondary Education
Social Work
Sociology

Spanish
Speech Communication
Theatre and Television Arts
Theology
Writing

Christ College:

Special Honors Program
The Humanities
Urban Semester

The College of Business Administration:

Accounting
Business Administration
Financial Management
General Management
Human Resource Management
Marketing Management
Business Economics

The College of Engineering:

Civil Engineering
Computer Engineering
Electrical Engineering
Mechanical Engineering

The College of Nursing offers a generic program in the field of nursing for freshmen, transfer students, and registered nurse students seeking a Bachelor of Science in Nursing.

Programs of the **School of Law** and the **Graduate Division** are described in separate bulletins.

The Freshman Year

Even though they may express clear-cut decisions, college freshmen are often uncertain about their long-range career goals. The University fosters this openness by encouraging them to discover new interests while cultivating their current ones. Each student, with the help of his academic adviser, designs a program that allows him first to explore various areas of interest and, in due time, to develop a plan of study focussing on a major area of interest.

A core of four courses, two each semester, involves all freshmen in common studies. A description of Freshman Seminar 5 is found below. Theology 5, Introduction to Christian Theology, helps students to investigate Christianity, the religion which not only has shaped our society, but which also remains vital today in giving meaning to human life. History 5, History of Western Thought and Society, is a course which leads students to understand how their own civilization has developed. English 5, Exposition and Argument, is a course which, like the others, requires students to increase their command of written and spoken English and their ability to analyze facts and ideas. Full descriptions of these courses can be found under their respective departmental

headings within the chapter on the College of Arts and Sciences.

The Freshman Seminar. In this seminar, the student joins other freshmen to study in depth a single topic proposed by the instructor. Because of its clear focus, the course not only improves but investigates the skills central to a liberal education: critical reading and thinking, effective discussion, disciplined speech and writing. Students have valued the seminar experience, especially because it introduces them effectively, yet personally, to what college-level work means and because it develops their self-confidence at the beginning of their academic careers.

Students indicate preferences among the various topics, different each semester. Usually they are assigned to one of their first three preferences. Topics of past seminars have included:

Computers, Society and Human Beings
Communities: Forms and Meanings
Women in the Twentieth Century
Nuclear Warfare
The Dramatic Character on the Historical Stage
The Thirties
North American Wildlife and Man

International Study Programs

In an age of global interdependence the University strongly encourages its students to acquire part of their education abroad. A variety of opportunities exist in which students may spend a summer, a semester or a whole year in a foreign setting as participants in one of the many established programs sponsored by other colleges and organizations. Subject to some restrictions, students may receive credit for this study which then becomes an integral part of their total program for the Valparaiso University degree. Using these opportunities Valparaiso students have studied in Japan, the Near East, Africa, South America and in many European countries. Specific suggestions and information are available through the Department of Foreign Languages and Literatures and the Office of International Studies. When a student decides on a program it is necessary to obtain the prior approval of an academic adviser and the academic dean in order to assure in

advance that the credit for courses taken will transfer to Valparaiso. The Registrar's Office provides a form for this as well as a form which enables a student to apply for a leave of absence from the University for the specified period of time.

The University itself sponsors four programs abroad, two of which (in England and West Germany) are exclusively for Valparaiso Students; the other two (in France and Mexico) are offered in cooperation with other institutions.

In order to facilitate planning both by students and the administration, students are encouraged to apply two semesters in advance of the semester in which they plan to participate. The deadline for applications is the end of the seventh week of each semester, and selections take place in the eighth week. Applications may be made up to the seventh week of the semester preceding the semester abroad, although there is the possibility that vacancies may no longer exist by that time.

Cambridge, England. The Cambridge Center is under the direction of a resident professor from Valparaiso University. Faculty from colleges in England offer courses which are considered as residence credit taken at Valparaiso University. Each student takes 12-15 credit hours of classroom work. Added to the classroom experience are field trips in England and the opportunity to travel both in England and on the continent. In this way, students expand their experience both by day-to-day living in a different cultural environment and through significant new personal contacts.

Students are charged a participation fee, as specified in the section, "Special Fees," page 186, and the cost for travel to and from the center which is arranged by the International Studies Office at the prevailing economy air fares. Students pay the normal tuition, general fees, and room without board.

Reutlingen, West Germany. At Reutlingen the University's center is on the campus of the Pädagogische Hochschule, an institution of higher learning in whose dormitories the students live. Instructors from that institution and nearby Tübingen University offer courses taught in the English language for Valparaiso students in

addition to several levels of German language instruction. A resident Valparaiso professor directs the Center. Provision for field trips in Europe in addition to the personal travel of students encourages independence, responsibility and the development of broad new perspectives. Internship opportunities with German professionals in various fields are also made available to students in this Center.

Students are charged a participation fee, as specified in the section, "Special Fees," page 186, and the cost for travel to and from the center which is arranged by the International Studies Office at the prevailing economy air fares. Students pay the normal tuition, general fees, and room without board.

Tübingen, Germany. By a special student exchange arrangement with the University of Tübingen, Valparaiso University may send two students per year to the University of Tübingen for an entire academic year. Only students who will have junior standing for the year in question may apply. Tuition is free, but students must pay all other expenses, including transatlantic transportation. Application must be made at the International Studies Office no later than the end of the seventh week of the preceding spring semester.

Puebla, Mexico. In Puebla, several hours south of Mexico City, Valparaiso is affiliated with the Universidad de los Americas which offers a full range of academic studies. This university was founded in order to foster understanding among the peoples of Latin and North America. Instruction is in Spanish and English, offering students a variety of challenges. Valparaiso maintains a center near the campus with a Valparaiso instructor in residence. Through the center a range of activities in the community and in Mexico is made available to students to enhance their academic and cultural experience.

Students pay the normal tuition, general fees, and room without board. There are no additional participation charges. Travel to and from the Center is arranged by the International Studies Office at the prevailing economy air fare.

Paris, France. As a cooperating member of the Central College (of Pella, Iowa) program in France, Valparaiso

University offers its students a semester or an entire year of study in Paris. The program is intended especially to strengthen students' facility in the French language and their knowledge of French manners and culture. It also lends itself well as an enrichment of the programs of majors in International Economics and Cultural Affairs. Students are enrolled either at the Sorbonne or in the Institut Catholique. The medium of instruction is French. Credits and grades, however, are in the American pattern. The full-year program is preceded by one month of intensive French language instruction at the Alliance Francaise.

Students register at Valparaiso University and pay to Valparaiso University the normal general fee of this University and the tuition and fees of Central College. Round trip air fare and other travel expenses are additional and are the responsibility of the student.

American Schools of Oriental

Research. Valparaiso University is a corporate member of this organization, which has institutes in Jerusalem, Amman, Baghdad and Cyprus. Several summer training programs in archeology are open to undergraduate students of this University through these institutes.

Off-Campus Study Programs in the United States

Washington Semester Program.

Through an agreement between Valparaiso University and the American University, Washington, DC, students from Valparaiso may spend one semester of their junior year (or some other semester by arrangement) at American University. The program is a set of courses designed to give the students an opportunity to see at first hand the broad range of the governmental and political activity in Washington through field visits, consultation with officials and evaluation sessions led by academic instructors. The program includes semesters on National Politics, Urban Politics, Science and Technology, International Development, Foreign Policy, Economic Policy and Justice.

The Valparaiso University course Political Science 1 is a prerequisite to this program. This program is not open to students who have participated in the Semester on the United Nations Program.

Students register at Valparaiso University for the Washington Semester and pay to Valparaiso University the normal general fee of this University and the tuition and fees of the American University. Expenses for travel, meals and lodging are paid directly by the students. The Washington Semester courses are accepted for full credit toward graduation from Valparaiso University.

For information on the Washington Semester Loan Fund see page 200.

Semester on the United Nations.

Through an agreement between Valparaiso University and Drew University, Madison, NJ, students from Valparaiso may spend one semester of their junior year (or some other semester by special arrangement) at Drew University. The curriculum involves on-the-scene observations and analyses of the United Nations through direct contact with United Nations meetings and headquarters. For two days each week of the semester the student is in the proximity of the United Nations in New York under the supervision of a member of the Drew University faculty.

Valparaiso University course Political Science 44 is a prerequisite to this program. This program is not open to students who have participated in the Washington Semester Program.

Students register at Valparaiso University for the Semester on the United Nations and pay to Valparaiso University the normal general fee of this University and the usual tuition and fees of Drew University. Expenses for travel, meals and lodging are paid directly by the students. Semester on the United Nations courses are accepted for full credit toward graduation from Valparaiso University.

Chicago Urban Semester. Through Christ College and with the cooperation of the Associated Colleges of the Midwest, the University offers to all students a one semester program involving residence in Chicago. Valparaiso University provides an instructor for the faculty of this program, which offers students 13-16 credit hours of instruction including closely supervised internships and independent study

projects. Through the course work, students learn the magnitude and complexity of an urban environment by analyzing and experiencing the political, social, economic and cultural forces shaping an American city. For descriptions of courses and grading policies refer to page 134.

Sophomores, juniors and seniors are eligible to participate. The program is offered both fall and spring semesters.

Valparaiso students register at Valparaiso University for the Chicago Urban Semester and pay to this University the tuition and general fee. Expenses for travel, meals and lodging are paid directly by the students. Chicago Urban Semester courses are accepted for full credit toward graduation from Valparaiso University.

Cooperative Education Program.

The three departments in the College of Engineering provide an optional cooperative program with industry, engineering consulting firms and government agencies. Cooperative engineering is a five-year plan of education in which the students alternate periods on campus with periods of work experience at the facilities of an approved employer.

To become an approved employer, the employer must agree to provide the student with diversified assignments related to the student's chosen field of study. The employer's part of the cooperative plan must provide an integrated series of experiences of increasing difficulty and responsibility.

A participant completes the same requirements for the bachelor's degree as a regular student and, in addition, acquires approximately eighty weeks of work experience by graduation. Advantages of the cooperative plan are the application of theory to actual engineering problems; confirmation of career choice; acceleration of maturation of the student, and earning a substantial portion of the cost of the University education. The cooperative program provides academic credit toward graduation upon satisfactory completion of the program.

Similar cooperative programs are available in the College of Arts and Sciences.

Students in these programs are considered to be continuing full-time

students of the University while in industrial assignments.

Other Academic Opportunities

Internships. A number of departments have established internship opportunities, some of which are optional whereas others are required. These internships allow students to learn by direct experience under the supervision of a professional; further information is given in departmental descriptions.

Honors Work and Independent Study. The University encourages honors work and independent study. Each college has its own approach to this form of instruction. Information should be sought from deans or department chairmen. Especially interesting is an opportunity for a group of students to develop a topic or area of studies to be approached as a group under the sponsorship of a faculty member. This independent group study program is administered through the Dean of the College of Arts and Sciences but is open to all students. More detailed information is given on pages 38-39.

Christ College. This College is itself one of the special educational opportunities available to all students of the University. It is an honors college which offers honors courses, special integrated courses and seminars which probe topics of interest not normally found in a single department. The College has a core community of students who follow a special course of studies in the area of general education but welcomes all students to inquire into its programs and to participate in it. Details are given on pages 132-133.

Mini Session. This session of three and one-half weeks is offered at the end of the Spring Semester. Courses during this session are designed specially to fit a concentrated period on a single topic and carry usually three credit hours. Details are available in a Mini Session Bulletin published about the beginning of the Spring Semester. See also page 169.

Summer Session. Certain courses normally taught in the Fall and Spring Semesters are offered during the Summer Session. A student can earn up to nine credit hours during this seven and one-half

weeks session, fully credited toward his degree. The combination of Mini and Summer Sessions enables a student to earn nearly a semester of credits during the late spring and summer months. This opportunity is available to students who wish to accelerate their programs or to newly admitted students who want to begin work on the college level before the Fall Semester. Details are available in a Summer Session Bulletin published about the beginning of the Spring Semester. See also page 169.

Lectures

Valparaiso University presents numerous lectures by scholars and public figures on topics of scholarly or current interest as an integral part of its academic program. Various endowed and named lectures are also presented each year, bringing distinguished men and women to the campus to address the University community.

John Martin Gross and Clara Amanda Gross Memorial Lectures, established by Mr. and Mrs. Walter H. Gross, are delivered annually by outstanding religious leaders to the entire University community.

Rae M. Huegli Memorial Lectures in Health and Hospital Care provide income for annual lectures in the College of Nursing. This endowed fund was established in memory of the wife of former President Albert G. Huegli because of her long interest in health services.

O. P. Kretzmann Lectureship in Christian Ethics, established in honor of the late President of the University, is delivered annually. Earnings from the O. P. Kretzmann Memorial Fund underwrite the

expenses. At the direction of the President of the University, the lectureship may periodically be replaced with a memorial sermon on a topic related to Christian faith and social issues.

A. J. W. and Elfrieda LeBien Endowment Fund for Lectures on Liturgy provides income for lectures on liturgy and for publication of brochures related to the Chapel.

J. W. Miller Memorial Lectures, delivered during Reformation Week by prominent religious leaders, were established in memory of Pastor J. W. Miller, who was an important influence in establishing Valparaiso as a Lutheran University.

Edward A. Seegers Lectures are presented annually by an eminent legal scholar. The lecture series honors Mr. Edward A. Seegers, a benefactor of the University who endowed the Louis and Anna Seegers Chair in Law. The series is under the supervision of the Seegers Professor of Law.

Percy H. Sloan Memorial Lectures in Art, established as a memorial to Percy H. Sloan, who endowed the Sloan Collection of American Paintings, are presented by prominent artists and art critics.

Thomas F. Staley Distinguished Christian Scholar Lectures were established by Thomas F. Staley to further the evangelical witness of the Christian Church, with a particular concern for college students.

University Lectures on various topics of current interest are presented from time to time at University convocations as an integral part of the University's educational program.

FACILITIES FOR LEARNING



Moellering Library

Buildings

Much of the University campus has been built within the past few decades. The academic buildings offer students modern, well-equipped laboratories and studios as well as classrooms and seminar facilities.

University Library Facilities

The general library for the University, the Henry F. Moellering Memorial Library, faces the Chapel of the Resurrection and, therefore, shares the center of the campus. Students, faculty and staff have available to them a collection of approximately 240,000 bound volumes, 88,000 microforms and over 1300 current periodicals. In addition, the library maintains a separate collection of 251,000 government documents and a collection of 92,000 maps. These have been developed primarily through depository status with the U.S. Superintendent of Documents, the State of Indiana, the U.S. Geological

Survey and the Defense Map Service. Musical and literary recordings are available in the Music Record Library, a collection of 4300 records and tapes. All materials are available to users on open shelves with the exception of reserve books, the University Archives and rare books. Reading rooms are air conditioned and seating is distributed throughout the building.

The library assumes an active role in interlibrary cooperative efforts and holds memberships in the Indiana Cooperative Library Association, the Ohio Colleges Library Center, the Northwest Indiana Area Library Services Authority, the Midwest Health Science Library Network and the Metropolitan Periodical Service. It is an Associate Member of The Center for Research Libraries. Through these relationships, the Interlibrary Loan Department provides services from other libraries with maximum efficiency.

The library staff emphasizes person-to-person contacts, beginning with welcoming tours to all freshmen. The professional staff, in addition to the Director, consists of five librarians and a trained musician in

charge of the Music Library. The librarians present bibliographic instruction sessions to classes, prepare bibliographies on special subjects and search sources from Biographic Retrieval Services on the library's TI 785 modem computer terminal. A new electronic searching service started in the summer of 1984, NEXIS, which gives patrons access to the N.Y. Times, Washington Post and other international newspaper indices, Accounting Information Library files (NAARS), and the Associated Press Political Service (e.g., biographical information on candidates, political events, issues and results, campaign information).

As the center for information on campus, the library provides a quarterly list of its newest holdings. Special days are highlighted through exhibits in the library; library materials are displayed at such times, and often a bibliography accompanies the exhibit. A "suggestion box" is available at the circulation desk for serious comments from patrons and all suggestions are answered by the library's professional staff.

Seating for 600 persons is scattered throughout Moellering Library: in the stacks, in the large, brightly lighted Reference Room, in the Special Reference area and in the lounge area students may stretch out on comfortable floor pillows. For more privacy there are individual study carrels as well as fifteen study alcoves where one can close the door on a first come basis. There is a group study where students can confer without disturbing other fellow students.

Art works from the Sloan Collection of American Paintings adorn the walls of Moellering Library, not only adding beauty to the surroundings but also contributing to the instructional goals of the library. As the Director of Libraries has stated many times, "We see the library as a center of learning and instruction, where we in the library act as mediators between the tools of knowledge and the knowledge itself."

The library of the School of Law, with over 130,000 holdings and LEXIS and WESTLAW computer bibliographic systems is located in Wesemann Hall. A curriculum library is maintained in the J.W. Miller Hall of the Department of Education.

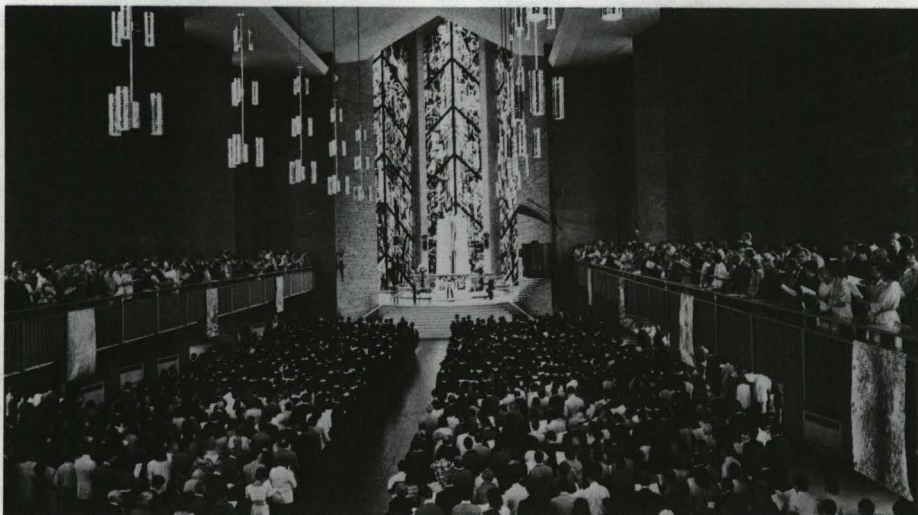
Computer Facilities

The Academic Computer Center, housed in the new Academic Computer/Communications Center, provides extensive and up-to-date facilities to support instruction in all areas of the curriculum. The primary facility is a Data General MV/8000 time-sharing system with forty-five video display terminals in several campus locations, and with a number of dial-in lines to service privately-owned terminals and microcomputers. In addition, the Academic Computer Center houses ten desk top systems for graphics presentation and computer-aided design applications, twenty-two microcomputers for text processing, as well as a number of general purpose microcomputers. Generous hours of access and extensive staff and student aide support are provided. In addition, the University plans continued expansion of computer services and equipment over the next three years. One such expansion will include the purchase of twenty-six additional text processing workstations.

A variety of microcomputers is also provided in the laboratories of the departments of Electrical and Computer Engineering, Mechanical Engineering, Computer Science, Physics, Chemistry, Education, and Psychology, the College of Business Administration and the School of Law.

Two additional computer systems are available to support course management, record keeping and faculty text processing in the College of Engineering and in the College of Arts and Sciences.

HONORS AND AWARDS



Graduation with Distinction

Students who have been in attendance at Valparaiso University at least three years (a minimum of ninety credit hours) and who have maintained a standing of at least 3.60 in their work at this institution are graduated "*With High Distinction.*" Students who have been in attendance for only two years (a minimum of sixty credit hours) must maintain a standing of 3.80 at this institution to be eligible for this honor.

Students who have been in attendance at Valparaiso University at least three years (a minimum of ninety credit hours) and who have maintained a standing of at least 3.40 in their work at this institution are graduated "*With Distinction.*" Students who have been in attendance for only two years (a minimum of sixty credit hours) must maintain a standing of 3.60 to be eligible for this honor.

Honors in Scholarship

Undergraduate students who achieve a standing of 3.50 in any semester except the last before graduation are awarded honors under the following restrictions:

1. The student received no grades of I or U at the official end of the semester concerned;
2. The student was registered for at least fourteen credit hours of work for that semester on campus in the College of Arts and Sciences, Business Administration or Nursing (thirteen credit hours in the third year of nursing), at least fifteen credit hours in the College of Engineering, or at least twelve credit hours in an International Studies Semester, Special Semester Off-Campus or any other approved cooperating program.

Graduating senior honors are announced at Commencement and are based on the work of the last two semesters. The standing of 3.50 must have been maintained cumulatively for both semesters; restriction one above applies, and the total credit hours for both semesters must be at least the cumulative total from restriction two above (i.e., twenty-eight credit hours on campus in the College of Business Administration, or twenty-six hours for one semester on campus in the College of Arts and

Sciences and one Washington Semester, for example).

Christ College. Graduates who complete the requirements of the honors college, Christ College, are designated Christ College Scholars or Christ College Associates.

Departmental Honors. Students in many departments of the College of Arts and Sciences may be awarded honors in their field of study provided they meet the specific requirements described on page 38.

Honor Societies

NATIONAL FRESHMAN HONOR SOCIETY

Alpha Lambda Delta. This national honor society recognizes women and men who achieve high scholastic standing during their freshman year.

NATIONAL SENIOR HONOR SOCIETY

Mortar Board. This national honor society recognizes outstanding men and women for leadership, scholarship and character.

NATIONAL COLLEGE HONOR SOCIETIES

Alpha Epsilon Delta. This national honor society recognizes students who have achieved academic distinction while pursuing a pre-medical or pre-dental program.

Sigma Theta Tau. This national honor society for nursing elects outstanding upper class students to membership on the basis of scholarship, leadership and character.

Tau Beta Pi. Engineering students who have demonstrated high academic achievement, exemplary character and a breadth of interest in the field of engineering are eligible for membership in this national engineering society.

VALPARAISO HONOR SOCIETIES

Chi Beta Alpha. A limited number of upper class students in the College of Business Administration are accepted each year into this local honor society on the basis of academic achievement.

Lumina Award. This honor is presented in the Spring of the Junior year

to students enrolled in the College of Arts and Sciences whose accumulated grade point average for the five preceding semesters is 3.60 (level of High Distinction) or above. It is awarded by the Arts and Sciences Scholarship and Advising Committee and the Dean of the College.

DEPARTMENTAL HONOR SOCIETIES

Accounting— Accounting Society
 Classics— Eta Sigma Phi
 Drama— Alpha Psi Omega
 Economics— Omicron Delta Epsilon
 Finance— Financial Management Association Honorary Society
 French— Pi Delta Phi
 Geography— Gamma Theta Upsilon
 German— Delta Phi Alpha
 History— Phi Alpha Theta
 Home Economics— Kappa Omicron Phi
 Journalism— Phi Alpha Epsilon
 Physics— Sigma Pi Sigma
 Political Science— Pi Sigma Alpha
 Spanish— Sigma Delta Pi

Awards and Prizes

Walther M. Miller Memorial Prize.

This prize is awarded to a student who has majored in German and demonstrated excellence in German studies at Valparaiso University. It is awarded in memory of Walther M. Miller, Distinguished Service Professor of German Language and Literature.

Bauer Award. This prize is presented annually by the History Department to the history major who has written the best historical paper during the year. The award is made in the name of Dr. Walter E. Bauer, Distinguished Service Professor Emeritus of History.

Roger and Hazel Guillaumant

Award. This award is presented annually by the Department of Foreign Languages and Literatures to the French major who has demonstrated outstanding achievement and promise in French studies. It is given in honor of Professor Emerita Hazel Guillaumant and her husband, Roger.

The Victor Hoffmann Award. Each year the Beta Nu Chapter of Pi Sigma

Alpha, national honorary political science organization, presents an award to the outstanding political science major voted by the faculty of the Political Science Department.

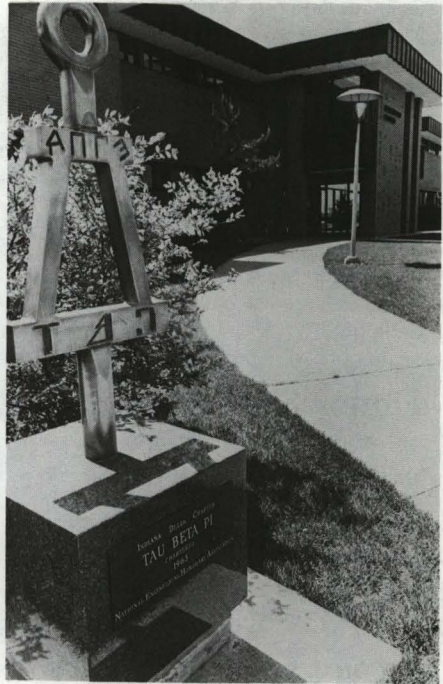
Pre-Law Award. An annual award is presented by Rentner Senate of the Delta Theta Phi Law Fraternity to the pre-law student who, at the completion of his seventh semester, has the highest academic standing in all collegiate work taken at Valparaiso University, provided that he has completed at least four of the seven semesters at Valparaiso University.

Mildred Tatum Davies Prize for Psychiatric Nursing. The Carillon Foundation for Health awards this prize to a senior nursing student selected by the nursing faculty for scholarship and dedication to working with the mentally ill.

Medals

Lumen Christi Medal. This medal is awarded to a lay person for distinguished service to Lutheranism. It is the highest honor Valparaiso University can bestow.

Medal of Merit. This medal is an award to recognize the outstanding service to society by the recipient through his chosen calling and by his exceptional activity in the advancement of the mission of Valparaiso University.



STUDENT LIFE



The Union

The University accepts and practices the view that a liberal education concerns the whole person. Its residential and cocurricular life encourages students to develop their full potentials, complementing and enriching their academic curricula.

The Office of the Vice President for Student Affairs coordinates the services offered to students and promotes a wide range of campus activities which enhance residential living at Valparaiso.

Student Residences

Although a number of students live in private or university-owned apartments near the university, and a relatively small number commute from the immediate region, the large majority of students live in one of the nine university residence halls or in one of the eleven fraternity houses located on or near the campus.

Dau, Kreinheder, Lankenau, Wehrenberg, Alumni and Brandt Halls are modern residence halls with rooms for one or two students. The last two are co-ed halls, men and women living on alternate floors. Guild and Memorial are slightly older but very comfortable buildings with one- or two-student rooms on the first two

floors and three- or four-student rooms on the third floors. Scheele Hall, a modern residence, is divided into individualized areas to provide accommodations for sororities. All of these residence halls are self-governed.

Three dining halls and the Valparaiso Union provide food services.

Student Conduct and the Honor System

Valparaiso University holds to the ideal of a community of Christian scholars living together in freedom and civility, in an environment conducive to Christian faith and supportive of the Christian ethic. A minimum number of rules and regulations is necessary for this community; these are found principally in the Student Handbook.

Each student enrolling at Valparaiso University thereby accepts the rules, regulations and procedures as found in this catalog and the *Student Handbook*. Conformity to the traditions and regulations of the University is expected. The University reserves the right to suspend or dismiss any student at any time when, in the judgment of its authorities, that action is deemed to be in

the best interests of the institution. Such a decision is normally made only by the President of the University on the recommendation of the Campus Judiciary Board.

The student-initiated Honor System has a long history at Valparaiso University and is a strong distinguishing characteristic of the institution. It is in every way consistent with the highest principles of Christian ethics and morality. In sanctioning the Honor System, the University presumes that students are able and willing to accept the duties and responsibilities of honorable conduct for the sake of the Valparaiso University community. Before they can enroll at the University, all entering students must sign and submit a statement that they understand the Honor System and are aware that all of their academic work must be submitted under their signature and that they have done this work in agreement with the Honor Code.

Under the Honor System, all written examinations of any length are taken in an atmosphere free from the surveillance of a proctor. Every student has the responsibility to keep academic work free of dishonesty; that is, neither to give nor to receive unauthorized aid. Non-tolerance of the use of unauthorized aid is a further responsibility which is inherent in the Honor System. All students must report to the Honor Council any violation of the System of which they become aware. Students are usually asked to sign a pledge on work done for academic credit to the effect that no unauthorized aid was given, received nor tolerated.

The Honor Council is an educational, preventive, remedial and judicial body with the duty of maintaining the Honor System in the academic community. The Council hears alleged Honor Code violations and then makes decisions regarding guilt or innocence and any penalty. The Council is composed of students who are chosen by the incumbent members subject to the approval of the President of the University.

The Arts

Valparaiso offers creative and interpretive activities in both curricular and cocurricular contexts, in music, drama, art, dance and creative writing. Prominent

artists and performing groups visit the campus frequently while students are encouraged to travel to Chicago to use its vast cultural resources. The Chapel of the Resurrection offers a magnificent setting for all the arts and frequently is the site for concerts and exhibitions. On the Chapel staff is a minister for the arts.

Music

Both instrumental ensembles and choral groups are sponsored by the Department of Music. These are open to all qualified students. Admission to these groups, listed below, is by audition only, except for the University Choral Society, the Marching Crusaders Band and the University Band. There are many occasions for students to learn and perform music of all periods. Private instruction is also available. Registration and the payment of an applied music fee entitles a student to a weekly private lesson and the use of practice facilities. The well-known Reddel Memorial Organ in the Chapel is available for organ students.

Concert Choir. The Concert Choir performs the finest of choral literature, both on campus and on major annual tours. Its distinguished reputation has resulted in requests for special performances in the United States and abroad.

Chapel Choir and Kantorei. The Chapel Choir and Kantorei, a choir with limited membership of 18 to 25 students, provide music for worship at the Chapel of the Resurrection. Kantorei also schedules off-campus appearances and short tours.

University Choral Society. The University Choral Society invites members of the broader Valparaiso community to join students in the performance of large choral works accompanied by the University Symphony Orchestra.

Treble Choir. The Treble Choir provides music for services at the Chapel and also performs on various occasions on campus.

VU Show Revue. The VU Show Revue performs a repertoire of popular music, Broadway show tunes and hit tunes, specially costumed and choreographed.

University Symphony Orchestra. The University Symphony Orchestra performs the standard orchestral

repertoire including works with chorus, opera and concertos.

Chamber Ensemble. The Chamber Ensemble consists of approximately twenty select instrumentalists who perform works for various chamber combinations.

Symphonic Band. The Symphonic Band is dedicated to the performance of the best in band literature.

Marching Crusaders Band and University Band. These bands provide music for parades and athletic events.

Jazz Band. The Jazz Band provides workshop and performance opportunities in jazz styles and literature.

Opera Workshop. The Opera Workshop is an ensemble of gifted singers devoted to the study and performance of major operatic works, fully staged.

Collegium Musicum. The Collegium Musicum specializes in the performance of works outside the standard choral and instrumental repertoire, including experimental works.

Drama

The University Theatre, supervised by the Department of Communication, provides creative experience in both curricular and extracurricular forms. Two objectives are served: cultural enrichment by developing acquaintance with great plays of many eras and by developing a sound critical sense; practical training in acting, stage management, advertising and other skills of play production. Four major stage productions are given annually, one of which is a musical. These are supplemented by studio and one-act plays which are classroom productions directed by students in play directing and special project courses.

Art

The Art Department offers basic studio courses in painting, drawing, design, sculpture, film, photography and ceramics. Several galleries scattered about the University continually show exhibitions of student art as well as works of distinguished contemporary artists. The Sloan Collection of American Paintings is the core of the University's collection of nearly 800 works of art. Works from these collections are on constant display and are supported by a special endowment which not only provides maintenance and

expansion of the collection but brings distinguished lecturers and artists to campus. A unique opportunity is afforded students interested in religious or liturgical art by the active creation of art for regular use in the Chapel.

Dance

Although dance is not a formal part of the University's curricular or cocurricular life, the Valparaiso University Dance Troupe, organized and maintained by students, attracts a great many participants each year. Talented and trained students have taken the leadership in presenting a program including substantial staging and lighting activities.

Creative Writing

Students may take courses in creative writing in the departments of English, and they may write for *The Lighter*, the campus literary magazine. *Wordfest* brings professional writers to campus and offers students an opportunity to enter their work for the *Wordfest* Literary Prizes in fiction, poetry and non-fiction prose and to present their work at several Open Readings. Students and faculty members welcome new members to an informal Writing Group to discuss work in progress.

Athletics

Valparaiso University provides a varied athletic program which assumes that sports can play a major role in college life by encouraging wide participation by the student body. The newly enlarged Athletics-Recreation Center is a major indoor facility. Outdoor facilities include tennis courts, eight all-purpose intramural fields, a hard surface track and fields for varsity baseball and football. Although the University provides an experienced staff and takes every precaution to avoid injury to all participants in the intercollegiate and intramural programs, it assumes no responsibility for accidents; students participating in these activities do so at their own risk.

Intramural Sports/Campus

Recreation. Valparaiso University is committed to a comprehensive program of recreational sports. A wide variety of team and individual sports are scheduled throughout the academic year. Students

are also encouraged to participate in the many informal sports activities, special events, and clinics offered in the new Athletics-Recreation Center.

Intercollegiate Competition. The women's division of the intercollegiate athletic program offers participation in basketball, field hockey, softball, swimming, gymnastics, tennis and volleyball. Associate membership is maintained in the North Star Conference.

The men's division offers intercollegiate competition in football, basketball, baseball, soccer, cross country, track, golf, swimming, tennis and wrestling. Membership is maintained in the National Collegiate Athletic Association. The men's teams participate in the Association of Mid-Continent Universities and the Heartland Collegiate Conference. Valparaiso University is a member of the National Collegiate Athletic Association.

Publications and Broadcasting

Students are encouraged to work in any aspect of campus publications and broadcasting, including writing, editing, advertising, sales, photography and layout. A student/faculty Committee on Publications and Committee on Broadcasting are responsible for the policies and regulations governing these activities.

The Beacon. The Beacon, the University yearbook, is designed and edited by students. It offers experience in art work, editorial work and advertising.

The Lighter. The Lighter, a student literary magazine, is published twice a year and welcomes contributions from all members of the University community. Art work, especially photography, is also a feature of this publication.

The Torch. The Torch is the student newspaper. A weekly publication, it covers a wide range of campus activities and involves students interested in all aspects of journalism.

WVUR. The station WVUR (95.1 FM) offers students a wide variety of experiences in radio broadcasting and management.

Organizations

Student Senate. The Student Senate is empowered by the Instrument for Internal Governance of the University with executive, legislative and judicial powers over the student body. It is composed of upper class student representatives and officers elected in the spring and freshman representatives elected in the fall. The Student Senate affords students the opportunity to assume the privileges and responsibilities of self-government. It also coordinates the five standing committees of Publications, Broadcasting, Residences, Off-Campus and Commuter Students and Union Board.

Committee on Publications. The Committee on Publications is responsible for policies and regulations of the University's student publications.

Committee on Broadcasting. The Committee on Broadcasting is responsible for policies and regulations of the campus radio station, WVUR.

Committee on Residences. The Committee on Residences has responsibility for the policies and procedures regarding residence hall use.

Committee for Off-Campus and Commuter Students. The Committee for Off-Campus and Commuter Students is designed to serve as a clearing house for information and services to off-campus students. Responsibilities include acquiring information on available housing and providing programs, services and information to off-campus and commuter students.

The Valparaiso Union Board. The Valparaiso Union Board develops, presents and coordinates social, recreational and educational events and programs to broaden student acquaintances and improve student life, and establishes policies for the use of the Valparaiso Union.

Fraternities and Sororities

Active chapters of national Greek social fraternities on campus include Delta Sigma Phi, Delta Theta Phi, Lambda Chi Alpha, Phi Delta Theta, Phi Kappa Psi, Phi Sigma Kappa, Pi Kappa Alpha, Sigma Phi

Epsilon, Sigma Pi, Sigma Tau Gamma and Theta Chi.

Greek social sororities include Alpha Phi Delta, Alpha Xi Epsilon, Chi Sigma Xi, Delta Phi Kappa, Gamma Phi, Kappa Psi Omega, Phi Beta Chi and Phi Omega.

The Dean of Women is the official adviser to the sororities and the Intersorority Council. The Dean of Men is the official adviser to the fraternities and the Interfraternity Council.

Fraternities are housed in their own individual residences. Sororities are housed in Scheele Hall, in individualized units within the hall.

Alpha Phi Omega. Alpha Phi Omega is the nation's largest service fraternity founded to develop leadership, promote friendship and give service to the campus, community and nation. Alpha Phi Omega is a co-ed organization whose goals are the development of the individual through both service and social events. Active membership in this service fraternity is open to all students of the University, and in no way interferes with membership in a social fraternity or sorority.

Clubs and Interest Groups

Clubs and interest groups abound on the campus. They focus on a variety of activities including academic and professional interests, hobbies, recreational activities, cultural interests, activities connected with the Chapel, religious interests, politics and service projects.

Black Student Organization. The Black Student Organization is devoted to maintaining a cohesive black community on campus, to promoting knowledge of black culture and to providing a forum for the expression of the ideas and goals of black students.

The Valparaiso Union

The **Valparaiso Union** is a combination of facilities, services, programs, activities, and people. Located in the center of the campus community, it assists in meeting the needs of students, faculty, administration, alumni, and guests.

The purposes of the Valparaiso Union are many. The Union is a common meeting place. Here students may meet guests, listen to music, watch TV, attend banquets, have meetings, study, hear recitals and lectures, see films and art exhibits, eat, discuss, listen, read, work, play, or just lounge.

The Union provides informal educational opportunities of a social, cultural, and recreational nature. Because the programs and activities are student sponsored, it gives each student an opportunity to develop qualities of leadership, cooperation, and responsibility. The Union is truly a vital part of the total educational program of Valparaiso University.

The Union is open 16 hours a day, 7 days a week, and includes a variety of facilities under one roof. These include:

Ye Olde Grail on the lower level of the Union is operated by Valparaiso University Dining Services. The snack bar, grill and cafeteria feature daily lunch specials plus complete menus for breakfast, lunch and dinner. The Catering Department offers a wide variety of services, such as banquets, luncheons, receptions, coffee breaks, picnics, barbeques and snacks for students, faculty, staff and outside groups.

Located in the upper level of the Union Building, the **University Book Center** contains all the required textbooks needed for classes, as well as a wide selection of other books, materials and gifts. The center also offers check cashing and a U.S. Post Office.

The **Union Recreation Center** includes billiards, bowling, video games, table soccer and table tennis. The **Outdoor Recreation Center** provides the campus with equipment and resources needed to pursue a variety of outdoor recreational activities. Equipment such as tents, backpacks, cross country skis and sleeping bags are available for use for trips and excursions. Trips such as camping, whitewater rafting, and backpacking in the Great Smoky Mountains are regularly offered.

The **Union Advertising Service** assists any campus group in publicizing its services and information. Posters, flyers, buttons, brochures, announcements and

mail box stuffers can be printed to aid in advertising campus events.

The **Student Activities Office** serves as a resource center for all student organizations, assisting with program planning, leadership development, promotion and publicity, committee recruitment and retention, budget preparation and time management. The Volunteer Students Bureau encourages student involvement with off-campus agencies and organizations for worthwhile community volunteer service.

Union Board develops activities in the areas of film shows, performing arts and lectures, mini courses, travel, and special events such as Homecoming, the ARC All-Nighter and Spring Weekend. Bus trips to Chicago to museums, art galleries, stores, concerts and theatres are arranged in the Union.

Other Union services include a ride board, commuter student mailboxes, lockers, bulletin boards, art exhibits, international student IDs, meeting and study rooms, lounges, and two large screen televisions. To inform the campus of events, the Union publishes the daily "Today on Campus", the weekly "What's on at VU", and the monthly "Student Activities Calendar". Union Board also offers a telephone activities hot line—a prerecorded message listing the latest in campus activities. The Union information Desk sells a variety of tickets for on-campus events, loans typewriters, offers magazines for browsing, and sells a variety of merchandise.

Campus Ministry

The ministry of Word and Sacraments centers in the Chapel of the Resurrection. A ministry is carried on also in the residence halls.

Students and faculty participate with the University Pastor and University Associate Pastor in preparing a rich range of services. In addition to holding services on Sunday and throughout the week at various times, the University has appointed 10:10 for Morning Prayer Monday through Friday when members of the community may come together for prayer and praise. Pastoral counsel is available at any time.

Students participate in the Choir of the Chapel of the Resurrection, as well as

other choirs which sing for chapel worship services; serve as organists for daily services; and serve as cantors and instrumentalists for Sunday and weekday services. Students design the service folder covers for Sunday services, plan chapel decorations and decorate the chapel for the seasons of Advent, Lent, Holy Week and Easter, as well as assist in the contribution of the arts for other chapel services.

Students chair chapel ministry groups of worship, social concerns, visitation, Christian growth and witness, and hospitality. All students are invited to participate in these and other areas of ministry.

Thunderhouse, the Roman Catholic Student Center at Valparaiso University, is located across the street from the university campus at 1511 LaPorte Avenue. The center is staffed by a full-time chaplain and a lay minister. Sunday and weekday Masses, as well as a full program of pastoral ministry, are conducted at the center.

Every courtesy is shown to pastors of other Christian churches in Valparaiso who wish to conduct a ministry for students of their denomination. A listing of area churches and the time of worship is available in the chapel office.

Services For Students

Career Planning and Placement

The Career Planning and Placement Office (located in Alumni Hall) offers assistance to Valparaiso University students in securing employment and offers career planning services to those who may need assistance in making career decisions.

The office maintains close contact with a wide variety of businesses, industries, and government agencies throughout the country. Each year a large number of companies and agencies send representatives to the campus in order to interview seniors. Additionally, the office keeps on file the credentials (personal data and references) of all graduates who register, without charge. Browsing racks and the Career Library contain a wealth of information regarding institutions,

companies, job opportunities and career information.

Career planning assistance is provided through seminars and workshops on topics such as "How to Succeed in Interviewing", "Doing a Job Search from Start to Finish", and "Marketing your Major". Students also have the opportunity to participate in special event activities—job fairs, Senior Orientation Week, Nursing Career Days, and video interviews. Resume and letter writing assistance is also provided. Students with career concerns and questions are assisted through the complicated job search process by the professional staff at the Career Planning and Placement Office.

The Teacher Placement Office gives assistance to beginning and experienced teacher candidates who have completed requirements for certification under the supervision of the Department of Education at Valparaiso University.

University Counseling Services

Counseling services at the University are provided by professional counselors and psychologists in the Student Counseling and Development Center and by trained pastoral counselors in the Chapel Counseling Program.

Services at the Student Counseling and Development Center include individual and group counseling, vocational and career development programs, a career resource center, special psychological education programs and consultation services. The Center offers specialized tests on interests, personality and psychological measurements. Services of a consulting psychiatrist are available. Except for nominal fees for certain testing programs, all services are free to full-time University students.

A pastoral counselor is available four evenings a week for personal and theological concerns under the direction of the University Pastor.

The Student Counseling and Development Center and the Chapel Counseling Program function cooperatively but as independent offices whose records are kept separate and confidential.

Academic Advising

One of the benefits of an education at Valparaiso is the availability of experienced

faculty members for personal conferences and advising. Many of these sessions develop informally. A formal system of advising is in place in each of the colleges.

Each entering student is assigned to an academic adviser to assist him in selecting a curriculum, meeting University requirements and making the most of his studies.

In the College of Arts and Sciences, each student who has not declared a major is assigned a general adviser. As soon as a student declares a major, he is assigned to a departmental adviser, often the chairman of his major department. A student in a special program is assigned a program adviser. The major field or interdisciplinary program of study should be chosen by the beginning of the junior year at the latest. Some majors and programs, for example, teacher certification, require students to declare their intentions and begin the programs at the beginning of the freshman year to make it possible to complete the degree or certification requirements in four years.

Each student must have his proposed schedule for the next semester signed by his academic adviser before it is filed with the registrar. If the student has more than one adviser (e.g. departmental, special program, Christ College), the student should have the signature of the special program adviser, but after consulting with the other adviser(s). The adviser's signature indicates only that he has counseled the student, not that he approves the schedule. Nor does the adviser's signature guarantee that the schedule will meet the requirements of the student's program.

The Writing Center

The University maintains a Writing Center in the lower level of Mueller Hall (Christ College). Faculty and student experts help students who are having difficulty in writing or who wish to discuss papers or writing projects. The staff is prepared to assist students in the development of their general study skills as well.

Tutoring

Mortar Board, an honor society, provides tutorial help to students in need of assistance.

The Valparaiso University Health Service

Valparaiso University is interested in promoting good health practices as well as preventing sickness and accident among students. The University maintains the University Health Service, under the direction of a Nurse Practitioner, with a Family Practice Physician and Registered Nurses, for the treatment of minor illnesses and minor accidents. The services of the physicians and nurses and some minor laboratory tests are provided to students without charge.

The University Health Service does not treat cases of serious illness or injury which require hospitalization; these are referred to the local county hospital adjacent to the campus or to physicians in the community. In order to meet at least a part of the cost of hospitalization, a basic insurance plan is offered to all full-time students of the University. This student insurance plan is not designed to cover all medical costs. The students or parents will be billed for costs over and above the basic insurance coverage either by the physician or by the hospital in those cases

where the plan pays only part of the medical expenses incurred. The University does not assume financial responsibility for a student in case of illness or accident.

The Health Service is open for student use between the hours of 8 a.m. and 4 p.m. Monday through Friday. At other times, in case of emergency, students may use the services of the Emergency Room at the local hospital, located one block from the campus.

The Valparaiso University Federal Credit Union

This is a financial cooperative whose membership is open to all students, alumni, members of the faculty and employees of the University, as well as their respective families. Its purpose is to provide the University community with a convenient financial facility. To become a member, one must subscribe for at least one \$5 share of stock. The purchase of one share of stock entitles one to all the rights and privileges of full membership. This association is governed by a board of directors elected by the membership and is supervised by the National Credit Union Administration of the United States Government. All accounts up to \$100,000 are insured by the National Credit Union Administration.



COLLEGE OF ARTS AND SCIENCES



Academic Computer-Communications Center

Forrest L. Vance, Ph.D.
Dean

James W. Albers, Th.D.
Associate Dean

Katharine H. B. Antommara, Ph.D.
Assistant Dean

The College of Arts and Sciences, the largest college of the University, consists of twenty-one departments and provides the University with its program of general education for all students as well as advanced work in the liberal arts, the sciences and in several professional areas.

Each degree in the College consists essentially of two parts:

- The general education component;
- The major field or interdisciplinary program.

To these two parts, the student adds elective courses chosen from all the offerings of the University.

General Education

A general overview of the general education program is presented on page 10. Although the general pattern applies to every degree in the College, certain variations are specified in the detailed presentation of degree requirements below.

The Major Field

Each student must complete a major field of study or an interdisciplinary program. Ways of meeting this requirement are presented in detail in connection with the degree requirements listed below. These options are intended to offer maximum flexibility so that students may find the courses of study best fitted for their interests and needs.

Degrees and Degree Requirements

ASSOCIATE IN SCIENCE DEGREE (60 CR.)

A. General education requirements

1. Theology 5 or 6 3 Cr.
2. English 2 or 5 3 Cr.
3. History 5 3 Cr.
4. Social Analysis 3 Cr.
5. Physical Education 1-5 1 Cr.

B. Major field requirements

At least 30 credit hours in Natural Science and Mathematics. (Students preparing for admission to one of the allied health fields should develop an appropriate program of study with the Associate Degree Adviser.)

C. Other requirements

1. The following work must be completed in residence at Valparaiso University:
 - a. 30 of the last 34 credit hours for the degree
 - b. At least 15 credit hours in Natural Science and Mathematics
 - c. The general education requirement in theology
2. The student must earn a cumulative grade point average of 2.00 on all work in residence and on courses in Natural Science and Mathematics taken in residence.

BACHELOR OF ARTS DEGREE (124 CR.)

A. General education requirements (62 Cr.)

1. Freshman Studies (12 Cr.)
 Freshman Seminar 3 Cr.
 Introduction to Christian Theology or Families of Abraham 3 Cr.
 Exposition and Argument 3 Cr.
 History of Western Thought and Society 3 Cr.
2. Academic Area Studies (47 Cr.)
 - a. Theology 6 Cr.
 One course from Level II and one course from Level III (in addition to one from Level I)
 - b. Literature and Fine Arts 7 Cr.
 English 25, Literary Studies and one course in Fine Arts or Fine Arts-Literature. Courses which fulfill the latter requirement are Art 101, 102, 111;
 Communication 38, 39, 135;

English 31, 65: Comedy and Modern Literature, and Architecture and Fiction; English 195: Literature and Film, and Shakespeare on Film; German 65; Spanish 50: Spanish America in Literature and the Arts; Greek 51; Music 1, 117, 118, 119, 120.

- c. Foreign Language 8 Cr.
 Course number 20 in a foreign language in which the student has no more than one year of high school credit, or course number 30 in any foreign language. A student who has completed a second year language course in high school will not be granted credit for course 10 in that language at Valparaiso University.
 International students whose native language is not English and who are studying on a non-immigrant visa are exempt from the foreign language requirement provided that they have fulfilled the general education requirements in English (English [2 or 5] and 25).
- d. Non-Western or Third World Studies 3 Cr.
 Courses which fulfill this requirement are Economics 128; Geography 2, 74, 104, 105; History 30, 31, 40, 41, 141, 160; Philosophy 55; Political Science 44, 154; Sociology 5; Spanish 50: Spanish American in Literature and the Arts; Theology 60, 162, 163, 164, 165. In appropriate cases, a course from this area may be used to fulfill another area requirement.
- e. Philosophical and Historical Studies 3 Cr.
 One course in either philosophy or history.
- f. Studies in Social Analysis 6 Cr.
 Two courses from the following selection: Economics 71, 72; Geography 1, 2, 62; Political Science 1, 40, 41, 44; Sociology 1, 5, 29. The two courses must be from two different departments.

- g. Studies in Natural Science and Mathematics 12 Cr.
One course with laboratory from each of the two following areas: the life sciences (biology, psychology), the physical sciences (astronomy, chemistry, physics, physical geography). The third course may be selected in one of three ways:

- (1) A course from any of the above five disciplines not previously selected;
- (2) a course from one of the above five disciplines previously selected which has that earlier course as its prerequisite;
- (3) four credits in Mathematics and Computer Science.

Note: CS 17 plus either 21 or 22 will fulfill this requirement.

- h. Physical Education

1-5 1 Cr.

6-49 1 Cr.

3. Integrative Studies.

University Course 3 Cr.

See page 40 for information concerning the University Course.

B. Major Field Requirements

Students may fulfill the major field requirements of the Bachelor of Arts degree by completing either a Department Major or an Individualized Major and by meeting one of the completion requirements listed below. In addition, the student may complete the Major Field requirement through an Interdisciplinary Program.

Departmental Major. In order to fulfill requirements under the Departmental Major, students must complete a minimum academic major. Departments in the College of Arts and Sciences offer the following major fields for the Bachelor of Arts degree: Art, Biology, Chemistry, Classics, Communicative Disorders, Computer Science, Economics, English, French, Geography, Geology, German, Greek, History, Journalism, Latin, Mathematics, Music, Philosophy, Physics, Political Science, Psychology, Sociology, Spanish, Speech Communication, Theatre and Television Arts, and Theology.

Individualized Major. An approved individualized major of thirty credit hours may be presented instead of the departmental majors listed above. This major is intended for students with clearly defined academic or career objectives who feel that their specific needs are not met by the departmental major option nor by the

interdisciplinary program option described below. A student in the College of Arts and Sciences may propose a plan for an individualized major which must be approved by the Dean of the College and must satisfy the following conditions:

1. The proposed major must include at least 30 credit hours but not more than 48 credit hours chosen from two or more departments.
2. None of the courses chosen may be courses used to meet the general education requirements.
3. The proposed major must include a comprehensive statement by the student justifying the overall major as well as the specific courses listed. Any revisions in the individualized major made after the original filing must also be justified by the student and approved by the Dean of the College.
4. The proposed major must include a statement by a member of the faculty indicating both support for the proposed major and his willingness to serve as the student's adviser.
5. The proposed major must be submitted to the Dean of the College of Arts and Sciences for approval, preferably by the beginning of the junior year, but no later than the deadline for filing for degree candidacy.

The selection of courses for the individualized major should reflect serious deliberation on the part of the student and adviser. Normally, the individualized major will not include lower division courses or courses of an introductory nature.

The individualized major may be freely substituted for a departmental major in any of the various combinations available to students in meeting major requirements for the Bachelor of Arts degree. Courses taken for this major may not be counted for credit toward a minor or a second major.

Completion of Major Field Requirement

In addition to completing either a departmental or an individualized major, students must complete one of the following:

1. An academic minor. The faculty recommends that minors be selected that are complementary to the major. An area minor in American Studies, British Studies, East Asian Studies, or Film Studies may be presented in fulfillment of this requirement. No course may be used to fulfill both a major and a minor requirement except with the permission of the Dean of the College.
An approved individualized minor of 15 credit hours may be presented in lieu of the departmental minor. At least 9 credit hours must be taken beyond the introductory level. The Dean of the College provides guidelines for such a design. A student may not graduate with both a minimum individualized major and an individualized minor as the method of fulfilling major area graduation requirements.
2. A second academic major. In addition to the first major areas listed above, Home Economics and Physical Education may also be selected. An approved individualized major may also be presented in fulfillment of requirements of a second major.
3. A first major with at least forty credit hours. However, no more than forty-eight credit hours from one department may be applied toward the 124 required for graduation. (This limitation does not apply to students pursuing a double major in the

Department of Foreign Languages and Literatures, Home Economics vocational certification, the Bachelor of Music or Bachelor of Music Education degrees, or students pursuing a Bachelor of Fine Arts degree.)

4. The Liberal Arts Business Minor, comprised of courses from both the College of Arts and Sciences and the College of Business Administration. See page 95 for details.

Interdisciplinary Program

The College of Arts and Sciences offers three Interdisciplinary Programs of study which students may pursue instead of the major options outlined above. These programs are coordinated by special administrative committees composed of faculty members drawn together by their interest in a particular subject not defined by boundaries of the traditional academic disciplines. Interdisciplinary Programs are currently offered in American Studies, International Economics and Cultural Affairs and Music Enterprises.

A departmental second major or departmental minor outside the areas included in the interdisciplinary major may be added.

In addition, area minors in Interdisciplinary Programs in American Studies, British Studies, East Asian Studies, and Film Studies may be added to departmental majors.

BACHELOR OF MUSIC DEGREE (128-134 CR.)

To be eligible for the Bachelor of Music degree a student must complete the required curriculum for the major area. In addition, he must pass all performance tests set for him by the Department of Music. He must earn 134 credit hours for a major in church music or 128 credit hours for the remaining major areas. He must have a grade point average of 2.00.

Two options are offered the student majoring in church music: organ and voice. Each student is expected, however, to acquire sufficient skill in organ performance and choral directing to assume a position as a qualified parish musician.

A. General Education Requirements

For details see the Bachelor of Arts Degree.

1. Freshman Studies 12 Cr.
2. Academic Area Studies
 - Theology 6 Cr.
 - English 25 4 Cr.
 - Foreign Language
(Course 20 or 30) 4-8 Cr.

- Studies in Social Analysis 6 Cr.
- Studies in Natural Science
and Mathematics 4 Cr.
- Physical Education 2 Cr.

3. Academic Area Studies Option Choose one.

- Non-Western or Third World
Studies 3 Cr.
- Philosophical and Historical
Studies 3 Cr.

4. Integrative Studies

- University Course 3 Cr.

B. Music Requirements

The requirements for the major fields are given on page 105.

BACHELOR OF MUSIC EDUCATION DEGREE (134-138 CR.)

To be eligible for this degree, a student must complete the curriculum described below. In addition, he must pass all performance tests set for him by the Department of Music. Four major areas are offered: vocal, instrumental, general and an area. The area major is designed for students who wish to prepare themselves for teaching in both the vocal and instrumental fields. A student must earn a total of 134 credit hours if the vocal, instrumental or general major is chosen. He must earn 138 credit hours if the area major is chosen. He must have a grade point average of 2.25. In addition to meeting the music requirements for the BME degree, each student must be formally admitted into the Teacher Education Program and the Professional Semester. See requirements listed in the Department of Education under Secondary Education, pages 63-64.

A. General Education Requirements*

For details see the Bachelor of Arts degree.

1. Freshman Studies 12 Cr.
2. Academic Area Studies
 - Theology 6 Cr.
 - English 25 4 Cr.
 - Studies in Social Analysis 3 Cr.
 - Studies in Natural Science and
Mathematics 8 Cr.
3. Academic Area Studies Option†

*When two general education requirements are fulfilled by the same course, e.g. Theology 60, which meets Non-Western/Third World and theology requirements, an additional general education elective must be taken to fulfill the 45 credit hour total.

†For certification, the BME candidate should take a history or social science course for this area.

Choose one course.

Non-Western or Third World

Studies 3 Cr.

Philosophical and Historical

Studies 3 Cr.

4. Additional Courses

General Psychology 51 3 Cr.

Communication 41, 43 or 45 (one course) 3 Cr.

5. Integrative Studies

University Course 3 Cr.

B. Professional Education

Requirements

Foundations of Education 62 . . 3 Cr.

Orientation to Secondary

Teaching 105 3 Cr.

Principles and General Methods of

Teaching 155 5 Cr.

Psychological Foundations of

Secondary Education 156 . . . 4 Cr.

Supervised Teaching 157 8 Cr.

Reading in the Content

Areas 174 3 Cr.

High School Music Methods 191 . 2 Cr.

Special Education 141* 1 Cr.

C. Music Requirements

The requirements of the major field are given on page 106.

BACHELOR OF SCIENCE DEGREE (124 CR.)

A. General Education Requirements

For details see Bachelor of Arts

Degree.

1. Freshman Studies 12 Cr.

2. Academic Area Studies

a. Theology 6 Cr.

b. English 25 4 Cr.

c. Non-Western or Third

World Studies 3 Cr.

d. Studies in Social Analysis . . 6 Cr.

e. Studies in Natural

Science and Mathematics 12 Cr.

One course with laboratory from

each of the following two areas:

the life sciences (biology,

psychology) and the physical sciences (astronomy, chemistry, physics, physical geography). In addition, students pursuing the Bachelor of Science degree must take Mathematics 36 (or equivalent) or Computer Science 17 and 21 (or equivalent).

f. Physical Education

1-5 1 Cr.

6-49 1 Cr.

3. Academic Area Studies Option

Select two of the following:

a. Fine Arts or Fine

Arts-Literature 3 Cr.

b. Foreign Language, one

course above 10 3-4 Cr.

c. One course in philosophy

or history 3 Cr.

4. Integrative Studies.

University Course 3 Cr.

B. Major Field Requirements

A student must complete one science major of at least 32 credit hours and:

1. A science minor, or

2. A non-science major, or

3. The Liberal Arts Business Minor

(See page 95 for details), or

4. An Education Minor;

or two minimum science majors (biology, chemistry, computer science, geology, mathematics, physics, psychology);

or complete at least 40 credit hours in the first major.

No more than 48 credit hours from a major may be applied toward the 124 credit hours required for graduation.

A geology major is offered as a special program in the Department of Geography.

The departmental major or the individualized major may be chosen provided that the major is at least 32 credit hours but not more than 48 credit hours; that courses for an individualized major are chosen from the sciences listed above, and that other restrictions on majors, page 31, are followed.

*Some students should take SPED 140, 3 Cr., instead of SPED 141 to fulfill licensing requirements in certain states.

**BACHELOR OF SCIENCE IN
EDUCATION DEGREE (124 CR.)**

Completion of a special curriculum with a major in elementary education leads to the degree of Bachelor of Science in Education. This degree is intended for students who plan to become teachers in elementary schools. The requirements for this degree are given in the announcement of the Department of Education on pages 62-63.

**BACHELOR OF SCIENCE IN FINE
ARTS DEGREE (124 CR.)****A. General Education Requirements**

For details see the Bachelor of Arts degree.

1. Freshman Studies 12 Cr.
2. Academic Area Studies
 - a. Theology 6 Cr.
 - b. English 25 4 Cr.
 - c. Non-Western or Third World Studies 3 Cr.
 - d. Studies in Social Analysis 6 Cr.
 - e. Studies in Natural Science and Mathematics 12 Cr.
 - f. Physical Education
 - 1-5 1 Cr.
 - 6-49 1 Cr.
3. Academic Area Studies Option
Select two of the following:
 - a. Fine Arts or Fine Arts-Literature 3 Cr.
 - b. Foreign Language, one course above 10 3-4 Cr.
 - c. One course in philosophy or history 3 Cr.
4. Integrative Studies.
University Course 3 Cr.

B. Major Field Requirements

1. The student must complete a major in art consisting of at least 54 credit hours, including Art 21, 22, 31, 32, 61, 101, 102, -111 or 120-, 121, 151 and 196. A concentration must be chosen in painting, sculpture, ceramics, photography, graphic design or art history.
2. The student must receive approval by the Department of Art of a portfolio presentation by the beginning of the junior year to be eligible for this degree.

C. Other Requirements

The student must earn at least 62 credit hours in non-art courses, which may be comprised of the general education requirements and electives.

**BACHELOR OF SCIENCE IN HOME
ECONOMICS DEGREE (124 CR.)****A. General Education Requirements**

For details see Bachelor of Arts degree.

1. Freshman Studies 12 Cr.
2. Academic Area Studies
 - a. Theology 6 Cr.
 - b. English 25 4 Cr.
 - c. Non-Western or Third World Studies 3 Cr.
 - d. Studies in Social Analysis 3 Cr.
 - e. Studies in Natural Science and Mathematics 12 Cr.
Chemistry 43 and 44
Biology 25 or 51
 - f. Physical Education
 - 1-5 1 Cr.
 - 6-49 1 Cr.
3. Academic Area Studies Option
Select two of the following:
 - a. Fine Arts or Fine Arts-Literature 3 Cr.
 - b. Foreign Language, one course above 10 3-4 Cr.
 - c. One course in philosophy or history 3 Cr.
4. Integrative Studies.
University Course 3 Cr.

**B. Other General Education
Requirements**

1. Psychology 51 3 Cr.
2. Sociology 26* 3 Cr.
3. Communication 45 3 Cr.

C. Major Field Requirements

See page 90 for requirements in the various home economics concentrations.

**BACHELOR OF SCIENCE IN PHYSICAL
EDUCATION DEGREE (124 CR.)****A. General Education Requirements**

For details see Bachelor of Arts Degree.

1. Freshman Studies 12 Cr.
2. Academic Area Studies

*Not required of the dietetics major.

- a. Theology 6 Cr.
- b. English 25 4 Cr.
- c. Non-Western or Third
World Studies 3 Cr.
- d. Studies in Social Analysis 6 Cr.
- e. Studies in Natural
Science and Mathematics 12 Cr.
- Biology 51 and 52
 Chemistry 43
- f. Physical Education
 - 1-5 1 Cr.
 - 6-49 1 Cr.
- 3. Academic Area Studies Option
Select two of the following:
 - a. Fine Arts or Fine Arts-
Literature 3 Cr.
 - b. Foreign Language, one
course above number 10 3-4 Cr.
 - c. One course in philosophy
or history 3 Cr.
- 4. Integrative Studies.
University Course 3 Cr.

B. Other General Education Requirements

- Psychology 51 3 Cr.

C. Major Field Requirements

The first major, if the student has a double major, must be physical education. See page 112 for specific major requirements.

BACHELOR OF SOCIAL WORK DEGREE (124 CR.)

A. General Education Requirements

General education requirements for the Bachelor of Social Work degree are the same as those for the Bachelor of Arts degree, pages 30-31.

B. Major Field Requirements

The first major, if the student has a double major, must be social work. See page 122 for specific major requirements.

Professional and Pre-Professional Areas

The College of Arts and Sciences offers degrees especially designed for: teaching in elementary schools, teaching of music, performance of music, creation of art works, work in home economics, work in physical education and social work. The appropriate degrees are described above, pages 30-35. In addition,

students can prepare for teaching in secondary schools under a variety of majors for Bachelor of Arts and Bachelor of Science degrees. The Deaconess Program, the pre-legal program and the pre-medical arts programs are professional preparatory programs a student may complete while pursuing a liberal arts major.

Students interested in any of these programs should declare the program before entering the sophomore year.

TEACHER EDUCATION PROGRAMS

The University currently prepares applicants for certification in the following types of teaching:

Elementary

General Elementary (Grades 1-6)

Endorsements in:

- Reading
- Special Education
(learning disabilities/ neurologically impaired)
- Coaching
- Health Education
- Music
- Physical Education
- Recreation
- Visual Arts

Conversion to Junior High/Middle School (Grades 5-9)

- Social Studies
- Language Arts
- Mathematics
- Science
- Foreign Language
- Visual Arts

Senior High (Grades 9-12)

Coaching endorsement

English major or minor

Foreign Language major or minor

- French
- German
- Latin
- Spanish

Health and Safety minor

Journalism minor

Mathematics major or minor

Music minor

Physical Education minor

Reading minor

Recreation minor

Science

Biology major or minor

Chemistry major or minor

Physics major or minor

Earth Space Science minor

General Science minor

Physical Science minor

Social Studies major or minor

Economics

Geography

Government

Psychology

Sociology

U.S. History

World Civilization
Speech major or minor
Visual Arts major or minor

All Grade Education (K-12)

Coaching endorsement
Music area major
Music (choral, general or instrumental)
major or minor
Physical Education minor
Visual Arts major or minor
Recreation minor

Junior-Senior High (Grades 7-12)

Coaching endorsement
Health and Safety minor
Music minor
Physical education major or minor
Reading minor

Conversion of secondary license to Junior High/Middle School

English
Foreign Language
Journalism
Mathematics
Science
Social Studies
Speech
Visual Arts

School Services Personnel

Nurse

The Teacher Education Program is under the direction of the Department of Education. Eligibility for admission to the program is determined by the department.

Note: Major and minor areas for teacher certification as in the list above are not the same as academic majors or minors. Consult the Department of Education for those courses required for major and minor areas for teacher certification.

PREPARATION FOR THE MEDICAL ARTS

Students can prepare for entrance into medical, dental, veterinary, medical technology or paramedical schools by entering one of the pre-medical arts programs of the College. Students in these programs must have their schedules approved at the beginning of each semester by an assigned academic adviser. Advising in the pre-medical arts is handled by pre-medical advisers, who are members of the Committee on Pre-Medical Arts. All recommendations to the professional schools are sent out by this Committee: Professor L. Smith (Chemistry) Chairman; Professors G. Cook (Chemistry), W. Leoschke (Chemistry), F.

Meyer (Biology) and E. Nagel (Chemistry), and Associate Professor G. Hicks (Biology).

Pre-medical and pre-dental students are invited to join the Pre-Medical Society, a student organization which promotes interest in medicine and dentistry through a program of guest lectures and social events. Those with outstanding academic records may be invited to join Alpha Epsilon Delta, a national medical honorary society.

In some fields such as medicine, dentistry and veterinary medicine, completion of a Bachelor of Arts or Bachelor of Science degree is often required before admission to a professional school. However, if three years or less of college work are needed for entrance into a professional program, a student may earn a bachelor's degree through the University's Combined Liberal Arts-Medical Arts program. This involves three years of work at Valparaiso University and one year of work at an approved professional school. Details are in the next section of this catalog. This program is often used by students in medical technology. The University has formal affiliations with the Schools of Medical Technology at St. Mary Medical Center, Gary, IN; Fort Wayne Lutheran Hospital; Parkview Memorial Hospital, Fort Wayne, IN; Community Hospital of Indianapolis, IN; Evanston Hospital, Evanston, IL; and Waukesha Memorial Hospital, Waukesha, WI. However, students may attend other approved institutions.

Students who want to enter allied health fields which require two years or less of college preparation may want to earn the Associate in Science Degree described on page 30. Further information about allied health fields may be obtained from the office of the Allied Health Adviser, Professor L. Smith.

Under the course, Group Studies 100 (see page 40), two topics are offered in the Mini Summer Session (see page 169) that are of interest to students in pre-medical arts: Medical Apprenticeship and Dental Apprenticeship. Details are given in a Mini Summer Session announcement each year.

COMBINED LIBERAL ARTS-MEDICAL ARTS PROGRAM

A student may complete the degree Bachelor of Arts or Bachelor of Science from Valparaiso University by completing three years of study at this University and completing an additional year's work at an approved school of medicine, dentistry, veterinary medicine, medical technology or other allied health disciplines. Prior approval of the program must be secured from the Committee on Pre-Medical Arts.

Specifically, the student who elects one of these programs must meet the following requirements:

1. He must spend the junior year in residence at Valparaiso University.
2. He must meet all general education requirements for the Bachelor of Arts or Bachelor of Science degree with the exception that one course in theology and the University Course requirement are waived.
3. He must complete an academic major. For the Bachelor of Science degree this major must be in one of the science fields.
4. He must offer at least 93 semester credit hours of college work.
5. He must make application for graduation by the deadline date as noted at the front of this catalog and present to the Office of the Registrar an official transcript of an additional year's satisfactory work at an approved professional school.

PREPARATION FOR THE STUDY OF LAW

According to the consensus of legal educators, particular courses are not a prerequisite to the study of law. Significant qualities of undergraduate preparation derive from the intellectual discipline required by exacting teachers rather than the subject matter of what is taught. The pre-law student should, therefore, consult with his academic adviser or *Pre-Law Adviser* to select courses in the student's areas of interest which will place demands on analytic skills and both verbal and written expression.

Students in this program may express common interests through the Pre-Legal Society.

PREPARATION FOR SEMINARY

Students may prepare themselves for seminary entrance by enrolling in the pre-seminary program of Valparaiso University. This program meets all the standards of the Association of Theological Schools for undergraduate education, as well as the entrance requirement of all Lutheran and other Protestant seminaries. Upon graduation from this program, students are usually accepted into the seminaries not only of the Lutheran Church Missouri Synod, but also of other Protestant bodies, and in graduate divinity schools throughout the United States.

A student who is interested in preparing for seminary entrance is helped by an adviser to select appropriate undergraduate courses. These include studies in the arts and humanities, in theology, in the biblical languages and in areas of the student's own special interest.

Further information on this program is available from the Chairman of the Department of Theology.

ARTS AND SCIENCES PRE-ENGINEERING PROGRAM

In some instances students applying for admission to the College of Engineering may require additional preparatory work, usually in mathematics or sciences, before admission is granted. A limited number of such students, as well as late applicants to the College of Engineering, are admitted to the College of Arts and Sciences. These students are assisted by the College of Engineering in developing a course of study which will prepare them for admission to an Engineering program. Students who successfully complete this course of study may then apply to the Dean of the College of Engineering for admission to that college.

ARTS AND SCIENCES PRE-NURSING PROGRAM

In some cases students applying for admission to the College of Nursing may require additional preparatory work, usually in the biological and social sciences, before admission is granted. A limited number of such students, as well as late applicants, are admitted to the College of Arts and Sciences. These students are helped by the College of Nursing to

develop a course of study which will prepare them for admission to the College of Nursing. Students who successfully complete this course of study, including all the liberal arts pre-nursing requirements given on page 163, with a standing of 2.00 or better may then apply to the Dean of the College of Nursing for admission to that College.

PROGRAM OF STUDIES IN DEACONESS MINISTRY

The University and the Lutheran Deaconess Association cooperate in the education of women for service in Deaconess Ministry.

A deaconess student may choose one of the following education plans:

PLAN 1—The student completes requirements for the Bachelor of Arts degree with a major in Theology, minor in a related field. Attendance at Valparaiso University during the junior and senior years is required. Practical courses are Fieldwork (two semesters) and Clinical Deaconess Education. A year of internship is required between the junior and senior years. This is a year of supervised learning through work in a church-related setting, enabling the student to develop knowledge and skills for Deaconess Ministry.

PLAN 2—The student completes the requirements for a major in one of the helping professions at Valparaiso University such as nursing, social work, education or music. In addition she takes at least a minor in Theology. Practical requirements are met in connection with the practicum for the major. A year of internship is an option. Otherwise, one year of association with graduate deaconesses is required after graduation before certification for consecration.

PLAN 3—A person who already has a bachelor's degree from an accredited college or university attends Valparaiso University for two semesters plus a mini session. The student takes a full complement of theology courses, including Fieldwork (one semester) and Clinical Deaconess Education. The student does one year of internship following completion of the academic work at Valparaiso University.

Pi Delta Chi is a professional society of deaconess students. This organization helps the student in the understanding of the diaconate and the varieties of ministries in which she can serve God and people.

Deaconess students participate in various formation, worship and social activities. The residence requirement for PLAN 1 students is two years. Students under PLAN 2 or PLAN 3 should discuss the residency requirement with the staff of the Lutheran Deaconess Association.

The education program is under the counsel and guidance of the staff of the Lutheran Deaconess Association. Inquiries should be directed to the Director of Student Services, Center for Diaconal Ministry, 1304 LaPorte Avenue, Valparaiso, Indiana 46383-9978.

COMBINED LIBERAL ARTS-ENGINEERING PROGRAM

A student may earn in five years (ten semesters) both the Bachelor of Arts degree and one of the Bachelor of Science in Engineering degrees. He may earn the two degrees by completing one of the engineering curricula and the general education requirements of the Bachelor of Arts degree as well as the major requirement of the College of Arts and Sciences. This requires him to earn 168 credit hours and to have a standing of at least 2.00 in all of his work. Students who elect such a program must have their schedules approved by both the Dean of the College of Arts and Sciences and the Dean of the College of Engineering at the beginning of each semester. Sample or representative curricula for such programs may be obtained upon application to the Dean of the College of Engineering.

Departmental Honors Work

Honors work is designated for students of exceptional ability who may benefit by earning a limited number of the credits required for graduation through supervised independent study rather than through regular course work. Students who make application for Honors Work should understand that their work will be evaluated according to the highest standards of scholarly achievement.

Honors Work may be taken by students of the College of Arts and Sciences only in the humanities, social sciences, natural sciences and theology. It may be taken only by candidates for the degree Bachelor of Arts or Bachelor of Science.

A student who has completed at least 80 credit hours, but has not yet entered upon the work of the last two semesters, and who has a cumulative grade point average of at least 3.00 and a grade point average in his major of at least 3.50 may apply to the Dean's Office for admission to Honors Work with the consent of the chairman of the major department. The

student must present a plan for a major independent study project to be undertaken under the supervision of a member of the major department. This plan must be approved by the chairman of the major department and submitted to the Committee on Honors no later than the end of the student's junior year. If the proposed independent study project is approved, the student shall enroll in the first semester of the senior year in course numbered 197, "Honors Work in [the major department]."

A student who has been admitted to Honors Work must present four copies of a completed draft of the independent study project to the chairman of the major department at least seven days before the beginning of the final examination period of the fall semester. The project is judged by a committee consisting of the chairman of the major department, the adviser, one departmental reader and one outside reader appointed by the Committee on Honors. If the work presented is found worthy of Honors by the examining Committee, the student is granted three credit hours for Independent Study in the major department with a grade determined by the Committee, and the student is admitted to Candidacy for Honors.

If admitted to Candidacy for Honors, the student shall register during the spring semester of the senior year in course numbered 198, "Honors Candidacy in [major department]." A student admitted to Honors Candidacy must complete the initial draft of the independent study project, incorporating additions or revisions suggested by the examining committee to its satisfaction. Six copies of the completed project report must be delivered to the chairman of the major department at least fifteen days before the beginning of the final examination period of the spring semester. The original examining committee shall then schedule an oral examination for the Honors candidate to assess the student's knowledge of matter covered in the independent study project and any other closely related matters deemed appropriate by the Committee. The Honors

candidate shall be notified beforehand of the related matters to be included in the examination. If, in the opinion of the examining committee the candidate is worthy of Honors, it shall recommend to the Dean that the student be awarded three credit hours with a grade of A or A- for course number 198, and be graduated "With Honors in [the major field]." If the candidate is not deemed worthy of Honors, the office of the Dean, upon consultation with the examining committee, may recommend that the student be granted three credit hours for Independent Study in the major department with a grade determined by the Committee.

During the semester or semesters he is engaged in Honors Work, the student is not allowed to carry more than 12 credit hours in addition to Honors Work. A student enrolled in Honors Candidacy is excused from all regular final examinations of the last semester of the senior year.

Cooperative Education

Cooperative Education in the College of Arts and Sciences is a program in which students combine professional, practical work experience with their academic programs. Students may be employed in full-time (called alternating) and part-time (called parallel) placements.* The program is available through various departments as well as through the general offerings of the College. The College's general program is intended both for undeclared majors who are able to use cooperative education on an exploratory basis and for declared majors who may wish to participate outside their major department on an elective basis.

The following policies govern Cooperative Education within the College:

1. The student works under the advisement of a faculty member who monitors the work experience, evaluates the required written reports by students, and assigns the course grade.
2. Students are eligible when they have completed two semesters in residence and have a minimum

*Normally, a full semester, full-time employment will earn a maximum of 3 credit hours; a full-time summer employment, a maximum of 2 credit hours; and a part-time (parallel) placement requiring a minimum of fifteen hours per week, 1 credit hour. Parallel placements of fewer than fifteen hours per week may be given 0.5 credit hours.

- cumulative grade point average of 2.5.
3. Placements require prior approval of the Coordinator of Cooperative Education— retroactive credit will not be granted.
 4. Course credits count as electives toward graduation or, in certain academic departments where specified, count toward the department's major or minor.
 5. No more than a combined total of 12 credit hours earned through cooperative education, internship, field experience, or other work experiences may be applied toward the meeting of minimum graduation requirements. (Exceptions may occur in certain departments due to professional certification requirements.)
 6. Repetition of the cooperative education experience is strongly recommended in order to achieve the maximum benefits of the program.

Additional restrictions may apply in departments where the cooperative education credits count toward major or minor requirements.

General Courses Offered by the College of Arts and Sciences

Freshman Seminar 5. Cr. 3. A limited enrollment course offered on a variety of topics and taught by faculty from across the University, Freshman Seminar introduces students to methods of study and inquiry central to a liberal education. By teaching skills of critical reading, thinking and writing, and integrating these with skills of oral presentation and productive discussion, the course encourages students in their learning and prepares them for lively participation in their academic careers. Students who transfer into the University with 24 or more semester hours of credit are excused from the seminar."

Cooperative Education 81. Cr. 0.5-3. This course is a pre-arranged, approved professional work experience

with a cooperating employer. A written report is required of each student. The prerequisites are one year in residence, a minimum cumulative grade point average of 2.5, and the approval of the Coordinator of Cooperative Education and the Dean of the College.

Cooperative Education 82-83. Cr. 0.5-3. Additional cooperative education experiences may be taken. The prerequisites are the same as for Cooperative Education 82, plus positive work performance evaluations by the previous Cooperative employer(s). This course may be repeated beyond 83 for additional credit, subject to the guidelines of the College, as stated on pages 39-40.

Group Studies 100. Independent Group Study Project. Each sem. Cr. 1-3. An independent group project is conducted on a topic selected by the group. Grading is limited to the use of S or U. Prerequisites: Approval of a faculty sponsor and the Dean of the College of Arts and Sciences.

This course is administered by the Dean of the College for students who desire to work as a group on an academic project. A proposal for an independent group study project must be submitted at least three weeks before the beginning of the registration period for the semester in which the project is to occur. Further details and an application form may be obtained at the Office of the Dean of the College of Arts and Sciences.

University Course 100. Cr. 3. This upper division general education course allows junior and senior students to confront significant issues and problems of value in a context that encourages application of the knowledge and skills acquired during the earlier stages of their undergraduate academic life. A listing of University Courses to be offered in any given semester is published in the regular Schedule of Classes. It is also available from the Office of the Dean of the College of Arts and Sciences.

This course has no direct department affiliation, has no course prerequisites, stated or implied, and is not applicable toward an academic major or minor in any department. In addition, this course is a residence requirement. In some cases,

"Students enrolled in the Christ College Freshman Program are exempted.

transfer students may be allowed to substitute an appropriate course taken at another institution, provided the substitution is approved by the General Education Officer.

Special Academic Regulations for the College of Arts and Sciences

REGULATIONS CONCERNING GENERAL EDUCATION REQUIREMENTS

1. A course may not be used to meet more than one general education requirement, with the exception of the required course in Non-Western or Third World Studies. Appropriately designated Non-Western or Third World Studies courses may be applied simultaneously toward fulfillment of certain area requirements.
2. Only courses of at least three credits may be used in meeting general education requirements (excluding the requirement in Physical Education), except in the case of specified four-credit courses comprised of two two-credit components.
3. Courses taken to fulfill major requirements may be presented in fulfillment of general education requirements where applicable.

RESTRICTIONS ON THE USE OF CREDIT HOURS FOR DEGREES IN THE COLLEGE OF ARTS AND SCIENCES

1. A student may apply no more than four credit hours in Physical Education 1-49

toward a degree in the College of Arts and Sciences.

2. Non-music majors are limited to 16 credit hours of applied music, of which no more than 4 credit hours may be in ensemble music. For further clarification see pages 108-109.
3. No more than 48 credit hours in any one department may be applied toward the total of 124 credit hours required for graduation. This limitation does not apply to students pursuing vocational certification in home economics, the Bachelor of Music or Bachelor of Music Education degrees or to students pursuing the degree Bachelor of Science in Fine Arts who present at least 62 non-art credit hours.
4. A student may apply no more than 13 credit hours *collectively* from the professional colleges of the University toward a degree in the College of Arts and Sciences, subject to the following exceptions:
 - a. Students selecting the Liberal Arts Business Minor may earn up to 16 credit hours in business administration courses.
 - b. For students in the Home Economics-Merchandising Programs or students in the Music Enterprises Program, required courses beyond the 13 credit hour limitation are allowed.

Note: A student who transfers from one of the professional colleges into the College of Arts and Sciences may apply credits within the restrictions listed above. For further clarification, consult the Dean of the College.

American Studies

Administrative Committee:

Associate Professor Kohlhoff
(History, Chair); **Professors Albers**
(Theology), **Feaster (English)**; **Trost**
(Political Science); **Associate**
Professors Brauer (Art), **Janke**
(Geography), **Martinson (Sociology)**,
J. Nuechterlein (Political Science),
Piehl (Christ College) and **Sponberg**
(English).

Students completing the Program in American Studies will have fulfilled major field requirements for the Bachelor of Arts degree under the Interdisciplinary Program Option.

Objectives. The Program in American Studies offers the undergraduate student an opportunity to study the whole civilization of the United States—its fundamental ideas, institutions and symbolic expressions as these have developed over time. This common subject matter is examined through a variety of methods and materials that reach across traditional disciplines. The student must, therefore, become familiar with the approaches of the social sciences, the fine arts and the humanities as these bear on the subject of American civilization. By drawing together these different perspectives, American Studies enables the student to attain a broad vision of the civilization, while deepening his understanding of what is both unique and universal about the United States.

Resources. Valparaiso University has special resources for the student in American Studies. Among these are the Library of American Civilization, containing more than 15,000 volumes of American materials on microfiche; the Sloan Art Gallery, and the Washington Semester Program (page 13), which allows students to spend a semester in Washington, DC, and intern at such institutions as the National Archives and the Smithsonian.

Program Requirements. A minimum of 48 credit hours in courses approved by the Administrative Committee. Courses must include the 24 credit hours designated in the Program Core and an additional 24 credit hours selected from the list of approved elective courses. The student and the Chair of the Committee,

who is adviser for all students in the Program, may select courses that fulfill individual academic or career objectives. Courses not included in the list of approved electives may be substituted in some instances if they are approved by the Chair of the Committee.

Area Minor in American Studies. A student fulfilling major field requirements under a Major Option may present an area minor in American Studies for the required minor. Requirements for the minor are a minimum of 24 credit hours approved by the Committee on American Studies. Courses must include at least 12 credit hours selected from the Program Core. The remaining credit hours are selected from the list of approved elective courses.

Program Core

Art 111 —American Architecture and Design or American Painting	3 Cr.
English 101 and 102 —American Literature	6 Cr.
Geography 174 —Historical Geography of the U.S.	3 Cr.
History 20 and 21 —American History	6 Cr.
Political Science 40 —Government of the U.S.	3 Cr.
Theology 124 —The American Religious Experience	3 Cr.

Elective Courses

Art 111 —Modern Art since 1945	3 Cr.
Christ College 140 —America at the Movies	3 Cr.
Christ College 160. Seminar —Modern American Social Thought	3 Cr.
Christ College 180. Seminar —Literature of the American Dream	3 Cr.
Communication 137 —American Theatre	3 Cr.
Economics 150 —Economic History of the U.S.	3 Cr.
English 165 —Studies in American Literature	3 Cr.
English 195 —Topics in Literature	3 Cr.

Note: the Department of English offers courses under both 165 and 195 that are applicable to the American Studies Program. Recent offerings include Literature of the South, The American Dream, Literature and History of the 1920's in America.

Geography 74 —North American Indian	3 Cr.
Geography 100 —Regional Geography of the United States and Canada	3 Cr.
History 121 —The American Revolution, 1763-1789	3 Cr.
History 122 —Slavery, Abolitionism and Sectionalism, 1815-1860	3 Cr.
History 123 —Civil War and Reconstruction	3 Cr.
History 124 —Depression and War: United States, 1929-1945	3 Cr.
History 125 —The Age of Anxiety: The United States Since 1945	3 Cr.

History 126 —American Constitutional History	3 Cr.	Political Science 158 —Problems in Political Philosophy: American Democratic Thought	3 Cr.
History 127 —History of American Political Parties	3 Cr.	Political Science 160 —Constitutional Law I	3 Cr.
History 175 —Research Seminar	3 Cr.	Political Science 161 —Constitutional Law II	3 Cr.
<i>Note: The Department of History frequently offers seminars that are applicable to the American Studies Program. Recent offerings include The American South, The Jim Crow Era, Slavery in the Americas, American Social Reform, History of American Thought, The Cold War.</i>			
Philosophy 54 —History of Modern Philosophy: American Philosophy	3 Cr.	Political Science 164 —The Presidency	3 Cr.
Political Science 41 —State and Local Politics	3 Cr.	Political Science 165 —Congress	3 Cr.
Political Science 155 —Problems in State and Local Politics	3 Cr.	Social Work 130 —American Minority Lifestyles and Human Rights	3 Cr.
Political Science 156 —Problems in American Politics	3 Cr.	Sociology 100 —When one of the following topics is offered:	3 Cr.
		Social Class and Life Styles	
		Women in Society	
		Sociology 106 —Urban Sociology	3 Cr.
		Sociology 170 —The American People	3 Cr.
		Theology 125 —History of Lutherans in America	3 Cr.



Art

**Associate Professors Brauer, Frey
(Acting Chair), Strimbu.**

The Valparaiso University Art Department offers instruction in graphic design, painting, drawing, photography, printmaking, sculpture, ceramics, art education and art history. Interdisciplinary majors are possible which combine these areas with such fields as journalism, drama, marketing and others. Upperclass majors typically work independently with individual members of the faculty. Gallery and cultural resources on campus and in nearby Chicago are an integral part of the curriculum. The University has the endowed Sloan Collection of American Paintings and an active exhibition program.

A major in art may lead to careers in the fine arts and related fine art services such as museum technology and gallery sales; in areas of visual communication such as graphic design, photography and illustration, and in the field of art education. A graduating art major is also prepared for graduate study in art history and the fine arts.

Major. A minimum of 30 credit hours in art which must include Art 21, 31, 32, 101, 102, 121 and 151. The Bachelor of Science in Fine Arts degree requires 54 credit hours of art; see page 34.

After completion of the core courses for each degree, a concentration must be chosen in painting, sculpture, ceramics, photography, graphic design or art history. Recommendation for admission to the B.S. in F.A. program requires a portfolio presentation to the faculty of the Art Department by the beginning of the junior year. Descriptions of specialized programs as well as suggested curricula are available from the Department Chairman. Field trips, art exhibitions, visiting artists and similar events are integral parts of the program of the Art Department.

Minor. A minimum of 15 credit hours in art constitutes a minor. Art 21, 31, 32 and either 101 or 102 must be included.

Degrees. Completion of the degree requirements of the College of Arts and Sciences with a major in art leads to the Bachelor of Arts degree intended to provide a general art background, or the Bachelor of Science in Fine Arts degree

primarily intended for students desiring to continue their training at the professional or graduate school level. See page 34 for the requirements for the B.S. in F.A. degree.

Specialization in art education is possible in either the B.A. or the B.S. in F.A. program; consult the Education Department concerning state and University requirements.

Approval of Schedules. Students who take a major or a minor in art must have their schedules approved by the Chair of the Department at the beginning of each semester. Students who expect to teach art should consult, as early as possible, the appropriate adviser in the Education Department concerning state and University Requirements.

ART HISTORY

101. Art History I.

Cr. 3. A survey of art history from prehistoric times through the Gothic period. Field trip.

102. Art History II.

Cr. 3. A survey of art history from the Renaissance to the present. Field trip.

111 (211). Topics in the Theory and History of Art.

Cr. 1-4. An investigation of major periods or developments in the visual arts. Included may be historical topics such as ancient, medieval, renaissance, baroque, modern art since 1945, American painting, American architecture, or theory topics such as aesthetics, modern design or color. Field trip. May be repeated for credit provided topic is different.

120 (220). Modern Art.

Cr. 3. A study of the major developments in painting and sculpture in the nineteenth and twentieth centuries. Field trip. Prerequisites: Art 101, 102, or consent of the instructor.

STUDIO

21. Drawing.

0+6, Cr. 3. A basic course in the fundamentals of drawing and using various media. Field trip.

22. Drawing: Advanced Studies.

0+6, Cr. 3. A study of more advanced techniques and problems involving the drawing media, to include the human figure. Field trip. Prerequisite: Art 21.

31. Design I.

0+6, Cr. 3. A course introducing the basic elements and principles of two-dimensional and three-dimensional design. Field trip.

32. Design II.

0+6, Cr. 3. A continuation of Design I. Field trip. Prerequisite: Art 31.

51. Ceramics.

0+6, Cr. 3. Basic ceramic processes including wheel throwing, hand building, tapestry and coiling. Field trip.

52. Ceramics: Advanced Studies.

0+6, Cr. 3. Advanced problems in clay construction and glaze formation with opportunities for specialization. Field trip. Prerequisite: Art 51.

61. Photography.

0+6, Cr. 3. Problems in forming photographic images for expressive aesthetic purposes with instruction in camera and darkroom techniques. Field trip.

62. Photography: Advanced Studies.

0+6, Cr. 3. A study of more advanced techniques and problems in photography. Field trip. Prerequisite: Art 61.

63. Filmmaking for the Beginner.

Cr. 3. A course in Super-8 filmmaking for the beginner. Aesthetic and practical aspects of filmmaking are considered. Students must own or rent their own cameras and meet costs of film processing. Enrollment limited to fifteen students. Field trip.

65. Photojournalism.

Cr. 3. Study of photography for publications, camera and darkroom techniques. Principles and production of single photographic images, photo series, photographic essays, the photo layout, and slide/sound presentation. Field trip.

74. Art of Fiber.

0+6, Cr. 3. A basic course in fiber manipulation, including loom weaving, tapestry, coiling. Field trip.

75. Art of Fiber: Advanced Studies.

0+6, Cr. 3. Advanced techniques and problems in the art of fiber. Field trip. Prerequisite: Art 74.

121. Painting.

0+6, Cr. 3. Problems in painting in oil and other media. Emphasis on color theory and composition. Field trip. Prerequisite: Art 21.

122. Painting: Advanced Studies.

0+6, Cr. 3. Continuation of Art 121 with increased concentration on students' individual interests. Field trip. Prerequisite: Art 121.

131. Graphic Design I.

0+6, Cr. 3. Problems in the design of graphic mass communications with instruction in typography, layout and finished art preparation. Field trip.

132. Graphic Design II.

0+6, Cr. 3. A continuation of Art 131, dealing with actual or specialized graphic communications problems. The student solutions may often be printed and used. Field trip. Prerequisites: Art 31 and 131.

151. Sculpture.

0+6, Cr. 3. Problems in forming sculptural statements in various materials and techniques such as concrete casting, metal welding, wood construction, etc. Field trip. Prerequisites: Art 21 and 32 or consent of the instructor.

152. Sculpture: Advanced Studies.

0+6, Cr. 3. Advanced problems in sculpture processes. Field trip. Prerequisite: Art 151.

161. Printmaking.

0+6, Cr. 3. Offering may be either intaglio techniques (etching, aquatint, drypoint) or silk screen printing. Check with department for specifics. Course may be repeated to cover both topics. Field trip. Prerequisite: Art 21.

162. Printmaking: Advanced Studies.

0+6, Cr. 3. Continuation of Art 161 emphasizing more advanced techniques. Field trip. Prerequisite: Art 161.

ART EDUCATION**89. Elementary School Art—Methods and Materials Workshop.**

0+6, Cr. 3, or 0+8, Cr. 4. A basic course providing the prospective teacher with studio experiences in the selection, organization and use of two- and three-dimensional art and craft materials for the elementary school. The fourth credit provides opportunities to work in elementary classrooms. This course may not be counted toward a minimum major or a minor in art. Field trip.

90. Secondary and Middle School Art—Methods and Materials Workshop.

0+8, Cr. 4. A basic course providing the prospective teacher with studio experiences in the selection, organization and use of two- and three-dimensional art materials for the middle, junior and senior high schools. This course may not be counted toward a minimum major or minor in art. Field trip.

191. The Teaching of Visual Arts.

Cr. 2. (See Education 191.) A study of the methods of teaching art in the secondary schools. This course may not be counted toward a major or minor in art. Field trip. Prerequisite: admission to Supervised Teaching.

SPECIAL STUDIES**196. Senior Seminar.**

Cr. 3. Independent work in a studio major's specialized program, combined with participation in group discussion and other special events. This work will result in a senior exhibition and portfolio. Field trip. Prerequisite: senior standing in the Bachelor of Science in Fine Arts program.

199 (299). Special Studies.

Cr. 1-4. (Graduate Cr. 1-3). Specialized work in the practice of art, the teaching of art and the history of art, arranged by a professor and one or more advanced students. Work in crafts, liturgical design, etc. may be included. A S/U grade option may be stipulated at the beginning of the course. May be repeated for credit. Field trip. Prerequisites: upperclass major and consent of the instructor. A formal written proposal is required before registration. The proposal becomes a permanent part of the student's file. Prerequisite for graduates: undergraduate art major.

Biology

Professors Hanson, Krekeler, F. Meyer, Tan (Chair); Associate Professors Hicks, Marks; Assistant Professor Davis, Scupham.

Biology is the disciplined study of living organisms. It is also a vital part of liberal education, enabling students to develop an appreciation of their own biological nature as well as of the great variety of organisms and communities of organisms with which they come into contact and upon which they are dependent.

The focus of biology may be at many levels: molecular, cellular, organismic, population, community, ecosystem. The department's program of study provides an introduction to each of these levels. Moreover, it is designed to meet the requirements of students who desire to do graduate study in one of the biological sciences, who plan to enter professional schools, who plan a teaching career in biology or who will work in industrial or governmental positions.

Pre-Medical Arts Programs. A major in Biology is an appropriate preparation for entrance into professional schools and programs such as medicine, dentistry, hospital administration, medical technology, optometry, osteopathy, physical therapy, podiatry, public health, veterinary medicine and other allied health fields. Further information may be obtained from the Chair or members of the Committee on Pre-Medical Arts.

Major. A minimum of 28 credit hours in biology is required for the Bachelor of Arts degree. Courses must include Biology 81, 82, 107, two of courses 120 to 140, two of courses 157 to 175 and 2 credit hours in 193 and/or 195.

A minimum of 25 credit hours in Biology fulfills the minimum requirement for a Bachelor of Science degree, provided that a second major is taken in another science (chemistry, computer science, geology, mathematics, physics or psychology). Courses must include Biology 81, 82, 107, one of courses 120 to 140, two of courses 157 to 175 and 2 credit hours in 193 and/or 195.

A minimum of 32 credit hours in Biology fulfills the requirements of the Bachelor of Science degree with a single

major with a non-science major or Liberal Arts Business Minor or science minor. Courses must include Biology 81, 82, 107, two of courses 120 to 140, two of courses 157 to 175, and two credit hours in 193 and/or 195, plus four additional credit hours chosen from Biology 120 to 195.

A minimum of 40, but not more than 48, credit hours in Biology fulfills the requirements of the Bachelor of Science degree without a minor. Courses must include Biology 81, 82, 107, two of courses 120 to 140, two of courses 157 to 175, two credit hours in 193, two credit hours in 195, plus at least six additional credit hours chosen from Biology 120 to 195.

Majors must include general chemistry and organic chemistry (71 or 107) in their programs. It is most appropriate for Biology majors to include in their plans of study courses in physics, mathematics, statistics and additional chemistry. The most appropriate foreign languages for biology majors are German and French. Majors desiring a Bachelor of Science degree must include either Mathematics 36 (or its equivalent) or Computer Science 17 and 21 (or the equivalent) in their programs.

Minor. A minimum of 16 credit hours in biology constitutes a minor. Two options are offered.

General Biology Minor. Courses must include Biology 81, 82, 107 and four additional credit hours from Biology 120 to 193.

Human Biology Minor. Courses must include Biology 51, 52 and eight additional credit hours from Biology 107 to 193.

Biology Club. Students with an interest in biology are invited to join the Biology Club.

Approval of Schedules. All students taking a major or minor in biology and all students planning to teach biological subjects must have their schedules approved by the Chair of the Department at the beginning of each semester.

Note: Entering students who satisfy requirements for Biology 81 by passing a departmental placement examination, the College Level Examination Program examination (CLEP) in Biology or the

Advanced Placement Examination (AP) in Biology are granted 4 credit hours toward graduation.

25. Biotechnology.

3+2, Cr. 4. An introductory study of modern biology in which those aspects of biotechnology that affect the welfare of humanity now or are likely to in the future are emphasized. This course is recommended for non-science majors who wish to take only one biology course for partial fulfillment of the general education requirement in Natural Science. Not open to students who have received credit for Biology 51 or 81.

41. Anatomy and Physiology.

2+2, Cr. 3, or 3+2, Cr. 4. A course on the human body's structure and functions. Lecture and laboratory work deal with the cells, tissues and organs of the integumentary, skeletal, muscular and nervous systems and special senses; the circulatory and lymphatic systems and blood; the excretory, digestive, respiratory, endocrine and reproductive systems; fluid and electrolytes, the reticuloendothelial system, the general adaptation syndrome and human development. Given in St. Louis and Ft. Wayne divisions only.

42. Anatomy and Physiology.

2+2, Cr. 3, or 3+2, Cr. 4. A continuation of Biology 41. Given in St. Louis and Ft. Wayne divisions only.

46. Microbiology.

2+2, Cr. 3, or 3+2, Cr. 4. A study of microorganisms and their relation to health and disease. Given in St. Louis and Ft. Wayne divisions only.

51. Human Biology I.

3+3, Cr. 4. An introductory study of the physiochemical nature of cells and tissues, cell division and human genetics, the musculoskeletal system, the nervous system and special senses and the endocrine system and chemical control. May be used for partial fulfillment of the general education requirement in Natural Science. May not be counted toward graduation by students who have taken Biology 81.

52. Human Biology II.

3+3, Cr. 4. A continuation of Human Biology I. A study of hematology and the anatomy and physiology of the following organ systems: cardiovascular, respiratory, digestive, excretory and reproductive. May be used for partial fulfillment of the general education requirement in Natural Science. Prerequisites: Biology 51 and Chemistry 43 or 51.

81. Unity of Life.

3+3, Cr. 4. A study of organic molecules, cells, tissues and organs for biology majors and minors. Emphasis is placed on the principles which unify all living forms: structure, energetics, physiology, inheritance and development. May be used for partial fulfillment of the general education requirement in Natural Science. May not be counted toward graduation by students who have taken Biology 51.

82. Diversity of Life.

2+4, Cr. 4. A survey of the kingdoms of organisms, their relationships and origins, and their roles in the economy of nature. Emphasis is on the structures and their functions, life cycles, development, distribution and ecology, evolution and the social and economic importance of representative members. May be used for partial fulfillment of the general education requirement in Natural Science. Prerequisite: Biology 81.

107. Genetics.

3+3, Cr. 4. An introductory study of the basic laws of genetics, the physical and chemical basis of inheritance, genes as functional and structural units of heredity and development, and qualitative and quantitative aspects of genetic variation. Human genetics and social implications are discussed. May be used in partial fulfillment of the general education requirement in Natural Science. Prerequisite: Biology 81.

110. Microbiology.

3+3, Cr. 4. A study of bacteria, viruses and selected fungi. Major emphasis is given to understanding infectious disease and immunology. Prerequisites: Biology 52 or 81 and Chemistry 43 or 51.

120. Biological Topics.

Cr. 3. A consideration of various topics in biology through lectures, laboratory work, field work and conferences. The topics are related to staff and student interests. May be taken more than once if topics are different. Current topics are Experimental Botany, Endocrinology, Entomology, Mycology, Ornithology and Systematic Botany. Prerequisites: normally Biology 82, but certain topics may have specific course requirements.

125. Comparative Vertebrate Anatomy.

2+3, Cr. 3. A comparative study of representative vertebrate animals, with emphasis on structures, functions and laboratory dissections. Prerequisite: Biology 52 or 82.

130. Mammalian Cell Culture.

2+3, Cr. 3. A study of the theory and practice of mammalian cells in culture. Emphasis is on the application of mammalian cell systems in studying experimental cytology, mutagenesis and somatic cell genetics. Prerequisite: Biology 107.

135. Field Biology: Fall.

1+6, Cr. 3. This course is designed to acquaint students with organisms they are likely to encounter in the field in the late summer and fall months. The lectures emphasize the flowering plants and insects, the most abundant organisms at this time, but in the field attention is paid to other common or conspicuous organisms. (Not open to students who have had a course in Entomology.) Prerequisite: Biology 82.

140. Field Biology: Spring.

1+6, Cr. 3. This course is designed to acquaint students with organisms they are likely to encounter in the field in the late winter and spring months. The lectures emphasize the flowering plants and/or birds, the most abundant organisms at this time, but in the field

attention is paid to other common or conspicuous organisms. (Not open to students who have had a course in Systematic Botany or Ornithology.) Prerequisite: Biology 82.

157. Ecology.

2+5, Cr. 4. A study of organisms in relationship to their physical and biotic environment. There is considerable field work in local terrestrial and aquatic habitats. Prerequisite: Biology 82 and preferably a prior field course.

159. Bacteriology.

2+6, Cr. 4. A study of cell biology of bacteria and their viruses including morphology, growth and cultivation, physiology, environmental factors and genetics. Prerequisites: Biology 107 and Chemistry 71 or 107.

161. Cell Physiology.

3+3, Cr. 4. A study of the fundamental physiological activities of animal and plant cells and tissues. The course includes lectures, assigned readings and laboratory work in cell structure and cell organelles, energy conversion and synthesis, membrane transport, excitability and contraction. Prerequisite: Biology 81 and Chemistry 71 or 107.

175. Developmental Biology.

3+3, Cr. 4. An introduction to the descriptive and analytic study of plant and animal development and growth, with emphasis on higher plants and vertebrate animals. Prerequisite: Biology 107.

191. The Teaching of Natural Sciences.

Cr. 2. (See Education 191.) A study of the methods of teaching natural sciences in the

secondary schools. Includes lectures, discussions, demonstrations and projects. This course may not be counted toward a major or minor in this department. Prerequisite: admission to Supervised Teaching.

193. Seminar in Biology.

Cr. 1. Student and staff presentation and discussion of selected topics in biology. Current topics are Biology of Algae, Economic Botany, Endocrinology, Human Evolution, Somatic Cell Genetics, Immunology, Protozoology, Radiobiology, Temperature regulation, Viruses. Prerequisites: 12 credit hours in Biology or consent of the Chair of the Department; certain topics may have specific course prerequisites. Normally three topics are offered each semester so that during a two-year period a broad spectrum of topics is available. A maximum of four seminars (on different topics) may be credited toward graduation. S/U grade optional.

195. Research in Biology.

Cr. 1. Special research problems. Prerequisites: 12 credit hours of Biology, consent of a supervising instructor and consent of the Chair of the Department. A maximum of 4 credit hours in this course may be applied toward graduation. S/U grade optional.

197. Honors Work in Biology.

Cr. 3. See Honors Work, page 38.

198. Honors Candidacy in Biology.

Cr. 3. See Honors Work, page 38.



British Studies

Administrative Committee:

Professor Startt (History, Chair);
Professor Trost (Political Science);
Associate Professors Henderson
(Economics) and Sponberg (English).

An area minor in British Studies may be presented in partial fulfillment of the major field requirements for the Bachelor of Arts degree under a Major Option.

Objectives. The British Studies Minor affords students an opportunity to study a body of knowledge as broad in scope as it is significant for the modern world. Great Britain has been the major laboratory not only of democracy but also of social reform, industrialization and the development of economic and political theory. Its widely acclaimed genius in the literary arts has been matched by its political leadership and by advances made in social experimentation. Moreover, in developing the idea of constructive political evolution as opposed to revolution, it advanced one of the great political ideas of the last several centuries. The study of such experience and achievement, however, exceeds traditional disciplinary boundaries. Therefore the interdisciplinary program approach is a logical and feasible way to structure a minor in this field of study.

Requirements. A minimum of 24 hours constitutes a minor. Courses must include four from the required Core Courses (12 credit hours) and at least four elective courses (12 credit hours).

Program Core

- Economics.** Select one of the following three courses 3 Cr.
Economics 155—Modern European Economic History
Economics 170—History of Economic Thought
Economics 175—History of Socialist Economic Thought
English 156—The Novel 3 Cr.
History Select one of the following two courses: 3 Cr.
History 113—History of Modern England
History 151—Survey of English History and Culture. Cambridge Center only
Political Science 44—Comparative Politics 3 Cr.

Elective Courses

Core courses which are repeated below may be chosen as electives when they are not selected as core courses.

- Economics 155** 3 Cr.
Economics 170 3 Cr.
Economics 175 3 Cr.
Economics 199 3 Cr.

Topics in Economics:

The Department of Economics may offer topics that are applicable to the British Studies Program.

- English 109**—Literature of the Medieval Period 3 Cr.
English 110—Shakespeare 3 Cr.
English 120—Literature of the Sixteenth and Seventeenth Centuries 3 Cr.
English 130—Literature of the Restoration and Eighteenth Century 3 Cr.
English 150—Nineteenth Century British Literature 3 Cr.
History 113—History of Modern England 3 Cr.
History 114—British Imperial Experience 3 Cr.
History 151—Cambridge Center only 3 Cr.
History 160—Topics in History 3 Cr.
History 172—Seminars 2-3 Cr.
History 180—Supervised Study 2-3 Cr.

Note: the Department of History frequently offers topics in courses 160, 172 and 180 that are applicable to the British Studies Program. Recent topics include The History of Journalism in Its Anglo-American Setting; Selected Readings in Historical Literature.

- Philosophy 53** 3 Cr.
 History of Early-Modern Philosophy
Political Science 153 3 Cr.
 Politics of Industrialized States: British Politics

Chemistry

**Professors Cook (Chair),
Leoschke, Nagel, L. Smith;
Associate Professors
B. Ferguson, Kosman; Assistant
Professor Engerer.**

Chemistry is the discipline that studies the fundamental nature of matter and the changes in energy and properties accompanying compositional changes in matter. As a scientific discipline, chemistry is firmly rooted in the liberal arts tradition, placing emphasis on the development of intellectual capability and judgment. Yet it is also a very practical discipline dealing with the fundamental technology of matter that affects our environment and our society. Because of the nature of the discipline, a wide diversity of careers is possible with a chemistry major. These range from industrial product development to academic research, from medical and paramedical careers to forensic (law enforcement) chemistry. Government, industry, schools and universities and many private institutions, such as museums, have a variety of openings for chemists.

The programs of the Department provide balance between theoretical and practical aspects of chemistry. Opportunities for carrying out directed or honors work research are available. A wide selection of instruments is maintained for student use in instructional laboratory work and research. The Department is approved by the American Chemical Society for the training of professional chemists. A student may choose to work toward a Bachelor of Arts degree which requires at least 24 credit hours in chemistry, a Bachelor of Science degree which requires at least 32 credit hours in chemistry or a Bachelor of Science degree in professional chemistry which requires at least 40 credit hours in chemistry.

The Chemistry Club, an affiliate of the American Chemical Society, provides extracurricular opportunities for students interested in chemistry.

Major. A minimum of 24 credit hours in chemistry meets the major requirements for a Bachelor of Arts degree. Courses must include Chemistry [52 or 63], 64 and 108.

A minimum of 32 credit hours in chemistry meets the major requirements for a Bachelor of Science degree. In addition to the courses listed above, Chemistry 101 or 121 is required.

Chemistry majors desiring a Bachelor of Science degree approved by the American Chemical Society for the training of professional chemists should complete not less than 40 credit hours in chemistry. This major must include Chemistry [52 or 63], 64, 80, 108, 122, 133, 134, 138 and one advanced course selected from 140, 150, 160, 195 and 196 or an advanced course in physics or mathematics. Physics 78 (or equivalent) and Mathematics 104 (or equivalent) are required. German is the recommended foreign language. With the approval of the Chair of the Department, the chemistry elective may be the Honors Work sequence, Chemistry 197 and 198.

Minor. A minimum of 16 credit hours in chemistry constitutes a minor.

Cooperative Education. Qualified students may combine semesters in chemical research at a professional work site with other semesters of traditional academic studies on campus. Although this program will probably extend the participating student's college education beyond the normal four years, the students will be financially reimbursed by the cooperating employer and also receive credit toward the chemistry major. No more than six credits earned in Cooperative Education may be applied toward minimum requirements of the major in Chemistry. Enrollment in this program is limited by the availability of positions offered by suitable cooperating companies. Eligible students are junior or senior chemistry majors who have completed Chemistry 108 with a cumulative grade point average of 2.5 in their mathematics and science courses. (For further information, refer to Cooperative Education, College of Arts and Sciences, p. 30.)

Scholarships for Chemistry Students. Gerhard Salzmann Endowed Scholarship. See page 192 for details. Charles W. Wolf Memorial Endowed Scholarship. See page 192 for details.

Approval of Schedules. All students taking a major or a minor in chemistry

must have their schedules approved by the Chair of the Department at the beginning of each semester. Students who pass the Chemistry Placement Examination (4 Cr.) and successfully complete Chemistry 63 (4 Cr.) are granted 8 credit hours toward graduation.

43. General Chemistry.*

3+2, Cr. 4. Intended for students who elect chemistry to meet one of the natural science requirements. It is a study of the principles of chemistry. Students taking a major or minor in Elementary Education, Home Economics, Nursing or Physical Education should take this course to meet their chemistry requirement. Not open to students who have taken Chemistry 51.

44. General Chemistry.*

3+2, Cr. 4. A continuation of Chemistry 43. It includes the study of organic chemistry and biochemistry. Not open to students who have taken Chemistry 52. Prerequisite: Chemistry 43 or 51.

48. Pharmacology.

Cr. 2-3. Introduces the principles of pharmacology with emphasis on commonly used groups of drugs as a foundation for further study in clinical nursing courses. Given in Ft. Wayne division only.

51. General Chemistry.*

3+3, Cr. 4. An introductory course in the fundamental principles of chemistry designed primarily for students who wish to pursue a scientific vocation. It is required of majors and minors in chemistry and students in pre-medical, pre-dental or medical technology programs except for students who take Chemistry 63.

52. General Chemistry.*

3+3, Cr. 4. A continuation of Chemistry 51. Semi-micro inorganic qualitative analysis is included in the laboratory work. Prerequisite: Chemistry 51.

51E. General Chemistry.

3+2, Cr. 4. Similar to Chemistry 51 except for laboratory hours. For engineering students.

52E. General Chemistry.

3+0, Cr. 3. Similar to Chemistry 52 but without laboratory and with more emphasis on organic chemistry. For engineering students. Prerequisite: Chemistry 53 or 51.

60. Symmetry in Chemistry.

7 weeks. Cr. 1. A qualitative introduction to the significance of symmetry in chemistry including the topics of molecular geometry, symmetry elements and operations, Schoenflies point group classification and molecular orbital nomenclature. Prerequisite: Chemistry 52 or 63. S/U grade.

63. General Chemistry.

3+3, Cr. 4. An accelerated introductory course in the fundamental principles of chemistry for students with a strong background in chemistry.

The laboratory includes semi-micro inorganic qualitative analysis. This is the introductory course that would normally be taken by the student planning to enter the chemical profession or graduate work in chemistry. Admittance by Departmental Placement Examination.

64. Quantitative Analysis.

3+4, Cr. 4. A study of the theory of chemical equilibria, electrochemistry and elementary chemical analysis. The laboratory work consists of an introduction to gravimetric, volumetric and instrumental methods of analysis. Prerequisite: Chemistry 52 or 63.

71. Organic Chemistry.

3+3, Cr. 4. An introductory survey of the nomenclature, reactions, structure and properties of carbon compounds. This course is designed for those students needing a one-semester survey of organic chemistry. Prerequisite: Chemistry 52 or 63.

80. Electronics and Scientific Instrumentation.

(Also offered as Electrical and Computer Engineering 80.) 2+3, Cr. 3. Modern electronic principles and devices are studied, with applications to scientific instrumentation. Laboratory experience with modern instruments is emphasized and simple troubleshooting techniques are taught. Prerequisites: sophomore standing and Physics 77 (may be taken concurrently).

101. Elementary Physical Chemistry.

3+3, Cr. 4. A one-semester course in physical chemistry covering elementary thermodynamics and kinetics, together with their applications to various chemical systems. Prerequisites: Chemistry 64 and 107 or equivalent. Not open to students who have taken Chemistry 121.

105. Biochemistry.

4+0, Cr. 4. The chemistry of proteins, carbohydrates, fats and nucleic acids, and the changes these undergo during processes of digestion and metabolism; stress on physical biochemistry topics and enzyme kinetics. Prerequisite: Chemistry 71 or 108 or consent of the instructor.

107. Organic Chemistry.

3+3, Cr. 4. An introductory survey of the nomenclature, reactions, structures and properties of carbon compounds. Prerequisite: Chemistry 52 or 63.

108. Organic Chemistry.

3+3, Cr. 4. A continuation of Chemistry 107. A further study of the reactions, structures and properties of carbon compounds, including reaction mechanisms and complex organic reactions. Prerequisite: Chemistry 107.

121. Physical Chemistry.

3+3, Cr. 4. A theoretical study of chemistry involving thermodynamics, kinetics and modern structural concepts. Prerequisites: Chemistry 64 and 107; 107 may be taken concurrently; Mathematics 76 or equivalent, Physics 78.

*Credit for Chemistry 51 and 52 (or 43 and 44) may be earned through the College Level Examination Program subject examination in General Chemistry.

- 122. Physical Chemistry.**
3+3, Cr. 4. A continuation of Chemistry 121.
Prerequisite: Chemistry 121.
- 130. Chemical Literature and Chemical Writing.**
Cr. 1. Discussion and library work on the important sources of chemical information. Experience in the use of *Chemical Abstracts*, *Beilstein*, chemical journals and government publications in chemistry. Includes discussion and practice with computerized data bases. Library work leads to the writing of a paper as well as an abstract of a single article. For the student who plans to do graduate work in chemistry. S/U grade.
- 133. Organic Instrumental Analysis.**
0+8, Cr. 2. Experiments involving theory and use of modern instrumental techniques to separate and identify organic compounds. Instruction both on the use of the instruments and on the interpretation of results. Prerequisite: Chemistry 108.
- 134. Analytical Chemistry.**
2+4, Cr. 3. A study of the theory and practice of instrumental techniques. Prerequisite: Chemistry 122 (may be taken concurrently).
- 138. Inorganic Chemistry.**
Cr. 3. A systematic descriptive study of the elements and their compounds with emphasis on periodic law. Prerequisite: Chemistry 108.
- 140. Polymer Chemistry.**
Cr. 3. An introduction to the study of macromolecules: their preparation, properties, reactions and uses. Emphasis is on synthetic macromolecules. Prerequisite: Chemistry 108.
- 141. Experimental Polymer Chemistry.**
0+4, Cr. 2. Experiments in the synthesis and characterization of polymeric materials. Prerequisite: Chemistry 140 (may be taken concurrently).
- 142. Seminar in Chemistry.**
Cr. 0. (Concurrent with 143-144). Required of all junior 40-credit-hour majors. They are expected to participate in discussions but are not required to present a report. Interested freshmen and sophomores are invited to attend. S/U grade.
- 143. Seminar in Chemistry.**
Cr. 1. Required of all senior 40-credit-hour chemistry majors. Each student must prepare and present a report on a special topic in chemistry. Participation in discussion of other topics is expected. S/U grade.
- 144. Seminar in Chemistry.**
Cr. 1. Required of all senior 40-credit-hour chemistry majors. A continuation of Chemistry 143. S/U grade.
- 150. Advanced Organic Chemistry.**
Cr. 3. A study of physical organic chemistry and strategy in modern organic synthesis. Topics include linear free energy relationships, the Woodward-Hoffman rules and semiempirical quantum mechanical calculation techniques for organic molecules. Prerequisites: Chemistry 108 and 122.
- 160. Quantum Mechanics.**
Cr. 3. The fundamental concepts of quantum mechanics are examined. Topics include state functions and their interpretations, the Schrodinger equation, approximation methods, multielectron atoms and molecules. Prerequisite: Chemistry 122 or consent of the instructor.
- 191. The Teaching of Natural Sciences.**
Cr. 2. (See Education 191.) A study of the methods of teaching natural sciences in the secondary schools. Lectures, demonstrations and projects. This course may not be counted toward a major or minor in chemistry. Prerequisite: admission to Supervised Teaching.
- 192. Cooperative Education in Chemistry I.**
Cr. 0.5 - 2. Experience in chemical research with a cooperating employer. Written report required. Prerequisites: Chemistry 108 and approval of the Chair of the Department. S/U grade.
- 193-194. Cooperative Education in Chemistry II-III.**
Cr. 0.5 - 2. Continuation of Chemistry 192. Prerequisites: Chemistry 192, satisfactory employer evaluation, and approval of the Chair of the Department. S/U grade. May be repeated beyond 194 for additional credit.
- 195. Special Problems in Chemistry.**
Cr. 1-2. A course in which each student attacks a chemical problem by study of the literature and by work in the laboratory. A written report is required. Prerequisite: consent of Chair of the Department.
- 196. Special Problems in Chemistry.**
Cr. 1-2. A continuation of Chemistry 195. Prerequisite: Chemistry 195.
- 197. Honors Work in Chemistry.**
Cr. 3. See Honors Work, page 38.
- 198. Honors Candidacy in Chemistry.**
Cr. 3. See Honors Work, page 38.

Communication

Associate Professors Galow, Kocher (Chair), Paul, Pick; Assistant Professors Guse, N. Meyer, Nantau; Instructor Kostrzeba.

The concentrations in the Department of Communication offer students an opportunity to study theories and techniques that will prepare them for careers in the varied fields of communications. The department offers opportunities to complete a major in one of six concentrations or to complete a minor. The communication curriculum emphasizes the connection between communication studies and the traditional liberal arts. It strives to provide students with a broad liberal arts background, specialized knowledge and practical experience in an area of concentration, and an understanding of the ethics and standards of the profession.

Major. Within the Communication major, six concentrations are offered:

1. Advertising/Public Relations,
2. Broadcast Journalism,
3. Communicative Disorders,
4. Print Journalism,
5. Speech Communication, and
6. Theatre and Television Arts.

All students who major in

Communication with concentrations in the following five areas—

Advertising/Public Relations, Broadcast Journalism, Print Journalism, Speech Communication, and Theatre and Television Arts—

must complete a minimum of 30 credits.

Courses must include:

- A. Required Core (9 credits):
Communication 45, 49, and 160;
- B. Twenty one (21) credits chosen from the courses described in one of the concentrations.
 1. Advertising/Public Relations: Must include Communication [61 or 66], 64, 65, [162 or 163], 165, [173 or 174], and 195.
 2. Broadcast Journalism: Must include Communication 50, 51, 61, 154, 165, and 195.
 3. Print Journalism: Must include Communication 61, 62, 165, 170, and 195.

4. Speech Communication: Must include Communication 41, 43, 44, 140, 143, and 144.
5. Theatre and Television Arts: Must include Communication [30 or 31], 35, [38 or 39], 41, [50 or 51], one of [131, 135, or 158], and one of [152, 156, or 157].

In addition to the 30 credit hour minimum for each of the above concentrations, students must complete one of the following options:

1. Approved courses to complete a minimum 40 credit hour major.
2. An approved 12-18 credit hour sequence of liberal arts courses.
3. An approved minor.
4. A second major.

A program of study should be submitted to the concentration adviser in the department by the first semester of the junior year. Students may exceed 21 credit hours for the specific concentration requirement B, but total credit hours in the Department may not exceed 48.

Communicative Disorders. All students who major in Communication with a concentration in Communicative Disorders must complete a minimum of thirty credit hours including the following: Communication 45 and 143; 20, 21, 22, 24, and 25; nine credit hours from 120, 121, 122, 123, 124, 126, 127, and 129.

Minor. A minimum of 15 credit hours in one of the concentrations, with the approval of the Chair of the Department or the concentration adviser, constitutes a minor.

Specialized Minors in Theatre and Television Arts. Students who choose a specialized minor concentration in Theatre and Television Arts must complete a minimum of 16 credit hours in one of the following discipline areas:

1. Acting
The minor must include Communication 31, 35, 36, 41 and 157. Toward the end of the completion of the course work, the student in Acting must do an independent project (course 196) for one credit hour, preparing scenes, sketches or monologues for public performance.
2. Theatre Production

The minor must include Communication 30, 31, 35, [131 or 133] and one course in

theatre literature [38, 39 or 137] . Toward the end of the completion of the course work, the student in Theatre Production must do an independent project (course 196) for one credit hour, directing a short play for public performance.

3. Theatre Design

The minor must include Communication 30, 31, 135, 156 and one course in theatre literature [38, 39 or 137] . Toward the end of the course work, the student in Theatre Design must do an independent project (course 196) for one credit hour, preparing designs and working drawings for costumes or scenery and lighting for a selected play.

Teaching Programs. Students who plan to teach journalism or speech communication and theatre in secondary schools with a major or minor in Communication should consult the Chair of the Department and the Education Department for specific requirements.

Cooperative Education. Qualifying students may participate in prearranged, approved professional work experiences. During their employment, students are financially reimbursed by the cooperating employer. Credits earned in this program apply toward the major and may substitute for internship requirements. (For further information, refer to Cooperative Education, College of Arts and Sciences, page 39.)

Degree. Students completing any of the concentrations in Communication, together with the degree requirements of the College of Arts and Sciences, fulfill requirements for the Bachelor of Arts degree.

Approval of Schedules. All students pursuing a major or minor in Communication must have their schedules approved by the concentration adviser at the beginning of each semester.

SPECIAL OPPORTUNITIES

Television Studio. The Department teaches all television classes in its new television studio. The studio is fully equipped for all levels of production and provides a quality laboratory experience. Students are also placed as interns in television studios in the area.

The University Theatre. Additional training and experience in acting and in dramatic production are provided by the

University Theatre. (Further information about the University Theatre can be found on page 23 of this bulletin.) Since the University Theatre serves as a laboratory for courses in theatre, theatre students are required to work a minimum number of hours on productions each year. The number of hours is determined by the departmental faculty.

Speech and Language Clinic. The clinic is a service offered by the Department to persons in the University and the community with communicative disorders. It also serves as a laboratory for the courses in Communicative Disorders. Anyone interested in remedial speech and language work should consult the Clinic Coordinator.

Forensics. Qualified students may participate in a variety of communication experiences. Students may participate in individual speaking and interpretation events, in Midwestern tournaments and, if eligible, in national contests.

Student Organization. Students with an interest in journalism are invited to join the Society for Collegiate Journalists.

COMMUNICATIVE DISORDERS

20. Communicative Disorders.

Cr. 3. An introductory study of the nature and treatment of disorders of speech, language and hearing.

21. Anatomy and Physiology of Speech.

Cr. 3. A study of the neurology of speech and language; the systems of respiration, phonation and articulation; the endocrine gland system. Alternates annually with Communication 24.

22. Speech Science and Phonetics.

Cr. 3. An introductory study of the international phonetic alphabet; an introduction to the processes of respiration and phonation, acoustics and the acoustic theory of articulation, and speech perception.

23. Sign Language.

Cr. 4. An introduction to the history, terminology, and basic skills of manual communication.

24. Audiology.

3+2, Cr. 4. An introductory study of basic techniques of puretone and speech audiometry, anatomy and physiology of hearing, pathologies of the ear and acoustics. Laboratory training with clinical audiometer simulators for diagnosing hearing disabilities and assessing treatment. Alternates annually with Communication 21.

25. Language Development.

Cr. 3. The study of developmental psycholinguistics including transformational grammar.

120. Articulation Disorders.

Cr. 2-3. The diagnosis and treatment of functional and organic disorders of articulation. Offered in alternate years.

121. Language Disorders.

Cr. 2-3. The nature, assessment and treatment of the delayed onset of speech and language development.

122. Fluency Disorders.

Cr. 2-3. The nature and treatment of stuttering and cluttering.

123. Voice Disorders.

Cr. 2-3. The diagnosis and treatment of functional and organic disorders of phonation.

124. Aphasia.

Cr. 2-3. The diagnosis and treatment of the impairment of symbolization caused by brain damage.

126 (226). Clinical Methods.

0+2, Cr. 1. Students observe and study actual therapy. This course is an orientation in procedures of the Speech and Language Clinic and preparation for 127, Clinical Practice. It should be taken in the semester immediately preceding the course in Clinical Practice.

127. Clinical Practice.

0+2, Cr. 1 or 0+4, Cr. 2. Supervised clinical experience in the evaluation and treatment of communicative disorders. Prerequisites: Communication 20, 21*, 22, 24*, 25*, 45, 120*, 143* and consent of the clinic director. May be repeated for credit.

129. Diagnostic Methods in Communicative Disorders.

Cr. 1-2. The study and practical use of many contemporary tests used by the speech-language pathologist. Includes articulation and language tests, voice, stuttering and speech mechanism evaluations. Includes formal and informal evaluation procedures. Prerequisite: Communication 127.

COMMUNICATION

30. Makeup and Costume.

2+2, Cr. 3. An introduction to the design and practice of stage and studio costumes and makeup, with discussion of materials, equipment and historical background.

31. Scenery and Lighting.

2+2, Cr. 3. An introduction to the design and practice of scenery building, lighting for the stage and studio, and production management.

33. Theatre Practicum.

0+2, Cr. 1, or 0+4, Cr. 2. Creative work in the backstage production of plays in the University Theatre. This course may be taken more than once for a maximum of six credit hours. Prerequisite: Communication 30 or 31.

35. Acting I.

2+2, Cr. 3. A basic course in the theory and technique of acting.

36. Acting II.

2+2, Cr. 3. A continuation of study in the theory and technique of acting. Prerequisite: Communication 35 or consent of the instructor.

38. World of Theatre I.

Cr. 3. An introduction to the history and literature of the theatre from the ancient Greeks to 1700. Development of theatrical performance is traced through films, slide projections, live performances, recordings and lectures. Prerequisite: sophomore standing. This course may be used to fulfill the Fine Arts/Fine Arts-Literature component of the general education requirements.

39. World of Theatre II.

Cr. 3. An introduction to the history and literature of the theatre from 1700 to the present. Development of theatrical performance is traced through films, slide projections, live performances, recordings and lectures. Prerequisite: sophomore standing. This course may be used to fulfill the Fine Arts/Fine Arts-Literature component of the general education requirements.

40. Public Speaking.

Cr. 2. Fundamental principles of organization, generation of argument, use of language and components of delivery for effective construction and performance of messages in a variety of speechmaking experiences. This course may not be included in a Speech Communication major or minor.

41. Oral Interpretation.

Cr. 3. A basic course stressing the communication of thought and feeling from the printed page to the listener. Emphasis is on analysis, interpretation and reading of drama, verse and prose.

43. Public Communication.

Cr. 3. A study of public communication in a variety of structured settings. Students participate in public interviews as well as deliver informative speeches, persuasive speeches, special occasion speeches and rhetorical criticism.

44. Argumentation.

Cr. 3. A study of advocacy through logical discourse. This course includes structured experiences in the research and development of argument, case construction, refutation and evidence. The Lincoln-Douglas, cross-examination and traditional debate formats are used.

45. Interpersonal Communication.

Cr. 3. A study of human communication dealing with intrapersonal, dyadic, small group and non-verbal areas. Students participate in a variety of semi-structured and pre-structured communication events.

49. Introduction to Mass Media.

Cr. 3. A course in the history, development and functions of mass media in society.

*May be taken concurrently with 127.

50. Radio Production.

Cr. 3. A practical course in radio production. Production planning, scripting, using sound effects, recording, mixing, editing and performing. Prerequisite: sophomore standing.

51. Television Production.

Cr. 3. A practical course in television production. Students produce programs and acquire experience in all facets of production, including scripting, shooting, editing and performing. Prerequisite: sophomore standing.

61. News Writing.

Cr. 3. A course in the fundamentals of news writing and news gathering. Practice in writing various types of news stories; problems of in-depth writing and reporting; introduction to newspaper organization and methods. Laboratory and field work. Prerequisite: English 5 or equivalent.

62. News Editing.

Cr. 3. A course in copy editing, headline writing and newspaper make-up. Basic principles of news evaluation, photo editing and introduction to newspaper layout. Laboratory practice. Prerequisite: Communication 61 or consent of the concentration adviser.

64. Advertising.

Cr. 3. Principles of advertising in relation to mass communication. Copy preparation, graphics and design. Prerequisite: Communication 49 or consent of the Department Chair.

65. Public Relations.

Cr. 3. Survey of the history, development, principles and practices of public relations; investigation of public relations ethics, relationships and role in mass media and society; case studies and experiments in public relations practices.

66. Feature Writing.

Cr. 3. A course in human interest writing. Creative news writing emphasizing originality of style and imaginative treatment in composition of news features and the personality sketch. Laboratory practice. Prerequisite: Communication 61 or consent of the concentration adviser.

81. Cooperative Education in Communication I.

Cr. 0.5-3. Professional work experience with a cooperating employer. Written report required. Prerequisite: approval of the Chair of the Department.

82-83. Cooperative Education in Communication II-III.

Cr. 0.5-3. Continuation of Communication 81. Prerequisite: Communication 81. May be repeated beyond 83 for additional credit.

131. Play Directing.

2+2, Cr. 3. A study of the art of directing, the problems of choosing a play, methods of casting and rehearsal procedures. Prerequisites: Communication 30 or 31, and 35.

133 (233). Theatre for Children.

2+2, Cr. 3. University students work with children in a laboratory context and survey the literature and theory of theatre for children.

Prerequisites: junior standing, Communication 30 or 31, and 35, or consent of the instructor.

135 (235). Theatre as Art.

Cr. 3. A survey of theatrical spectacle as an art form paralleling developments in architecture, landscaping, painting, sculpture and interior design from the Middle Ages to the present. Class lectures and discussions are centered around slides and pictorial displays. This course may be used to fulfill the Fine Arts/Fine Arts-Literature component of the general education requirements.

137 (237). American Theatre.

Cr. 3. A survey of the American theatre and drama from the eighteenth through the twentieth centuries. The modern period, including playwrights such as O'Neill, Miller, Williams and Albee, and musical theatre is given special emphasis. Prerequisites: English 5 and junior standing.

140. Rhetorical Thought.

Cr. 3. A study of the theories of rhetoric as a force in the political and intellectual development of Western cultures. This course includes selected theorists from Plato and Aristotle to Kenneth Burke. Prerequisite: junior standing or consent of the instructor.

143. General Semantics.

Cr. 3. A non-Aristotelian consideration of the relationships between language and human behavior, including an examination of pathological language usage.

144. Persuasion.

Cr. 3. A study of motivational communication. This course includes theories of persuasion and offers structured experiences for the producer and consumer in the persuasive process. Prerequisite: consent of the instructor.

146. Small Group Communication.

Cr. 3. The study of theories and techniques of communication in small groups. This course includes a variety of experiences in group participation and leadership. Special emphasis is placed on group structure, the influence of the group on the individual, group participation, leadership functions and group problem solving techniques. Prerequisite: Communication 45.

152. Writing for Stage and Screen.

Cr. 3. Devoted to the study of creative writing in dramatic form, giving special attention to the particular requirements of stage, film and television. Prerequisite: English 5 or consent of the instructor.

153. Broadcast Programming.

Cr. 3. Theories of programming, current program forms, examination of the structure and function of television and radio programming practices, including relationships to entertainment, information and the audience. Prerequisite: Communication 49 or consent of concentration adviser.

154. Broadcast News.

Cr. 3. A course in the fundamentals and special requirements of radio and television news reporting, writing and editing. Laboratory and field work. Prerequisite: Communication 51 or consent of the concentration adviser.

- 156. (256). Design for Stage and Television.**
2+2, Cr. 3. The translation of written and verbal concepts into scenic elements of line, form, space, texture and color. The actor/audience relationship is examined with regard to design for the various forms of theatre and television.
- 157. Performance for the Camera.**
2+2, Cr. 3. A practical course in relating acting and performance techniques to the special requirements of the studio and television camera. Prerequisite: Communication 35 or 41.
- 158. Advanced Television Production.**
Cr. 3. Workshop format emphasizing advanced production and program practices. Projects include preparation of television materials for possible off-campus usage. Prerequisite: Communication 51.
- 160. Communication Theory and Research.**
Cr. 3. Examination of communication theories and practical application of communication research techniques.
- 161. Editorial and Opinion Writing.**
Cr. 3. A course in structure, style and principles of editorial, column, commentary and critical review writing. Laboratory practice. Prerequisite: Communication 61 or consent of the concentration adviser.
- 162. Public Relations Copywriting.**
Cr. 3. Persuasive and effective copywriting. Prerequisites: Communication 65 and [66 or 170] or consent of the concentration adviser.
- 163. Advertising Copywriting.**
Cr. 3. Persuasive and effective copywriting for advertising. Prerequisite: Communication 64 or consent of the concentration adviser.
- 165. Mass Media Law and Ethics.**
Cr. 3. Discussion of major legal and ethical issues which affect the mass media. Prerequisite: junior or senior standing or consent of concentration adviser.
- 170. Advanced News Practice.**
Cr. 3. A course for the advanced journalism student, comprising in-depth reporting, opinion and editorial writing, specialized writing. Prerequisite: Communication 61 and 66, or consent of the concentration adviser.
- 173. Advanced Advertising.**
Cr. 3. Advanced study in advertising with emphasis on practical work, problem solving and case studies. Prerequisites: Communication 64 and junior standing.
- 174. Advanced Public Relations.**
Cr. 3. Advanced study with emphasis on practical work, problem solving and case studies. Prerequisite: Communication 65 or consent of concentration adviser.
- 175. Mass Media in Modern Society.**
Cr. 3. Study of interaction between mass media and society. Freedom of the press theories, communication theory and relationships in the role of mass media with government, business, the courts and other segments of society. Open to juniors and seniors.
- 191. The Teaching of Communication.**
Cr. 2. (See Education 191.) Methods of teaching communication, theatre, journalism and mass media courses in the secondary school. Prerequisite: admission to Supervised Teaching, Communication 192, or consent of designated adviser. This course may not be counted toward a major or minor in the Department.
- 192. Supervision of Student Publications.**
Cr. 3. Problems and practices of supervision of secondary school student newspapers, magazines, yearbooks and other school publications. Includes examination of state-adopted texts, the role of the high school press, budgeting and financial responsibilities, organizing staffs, working with school administration, establishing curriculum, reviewing other school publications and basic journalistic styles. May not be counted toward a major or minor in this Department. Field Trip. Prerequisite: admission to Supervised Teaching and Communication 62, or consent of the designated adviser.
- 195. Internship.**
Cr. 1-5. Internships in which students may intensively study a particular area of communication. May be taken more than once. Prerequisite: consent of concentration adviser.
- 196. Topics and Projects.**
Cr. 1-3. Individual or group. Specific topics or projects based on special interests of students and faculty. Topics and projects vary from one semester to another. May be repeated for different topics or projects. Prerequisites: junior or senior standing and consent of the concentration adviser.

East Asian Studies

Administrative Committee:
Professor Ludwig (Theology, Chair);
Professors Kallay (Geography) and
Trost (Political Science); Associate
Professors Juneja (English) and
Schoppa (History); Assistant
Professors DeMaris (Foreign
Languages) and McGuigan (College
of Arts and Sciences).

Students may complete one of three programs in East Asian Studies. An interdisciplinary major may be arranged with the chairperson of the East Asian Studies Committee. Students majoring in another field may fulfill the major field requirements by completing a second major or a minor in East Asian Studies.

Objectives. Programs in East Asian Studies provide an opportunity for students to focus their study on this important area of the world, by examining the history, culture, and religions of China and Japan, in addition to developing some proficiency in the Japanese language. It provides essential background for students considering a career in education, business, government, or the arts related to the East Asian cultural sphere.

Individualized Major. Students wishing to complete an individualized major in East Asian Studies must complete the requirements as outlined on page 31. Students considering this option are urged to consult with the chairperson of the East Asian Studies Committee as soon as possible for proper advising. Courses would normally include History 40, History 41, Japanese 10, Japanese 20, Japanese 50 or 51, Political Science 175 (East Asia) or 154, Theology 163, and East Asia 175. Additional electives should be selected from the list below.

Second Major. A student fulfilling major field requirements under a Major Option in another field may present as a second major an area major in East Asian Studies. The requirement for the second major is a minimum of 35 credit hours selected from the following list of courses. Other appropriate courses, including credits in supervised reading and research, may be substituted with the permission of the Chair of the Committee. Courses must include History 40, History

41, Japanese 10, Japanese 20, Theology 163, one additional course in History, and East Asia 175, plus 12 credits in elective courses.

One year of Chinese, transferred from another institution, may be substituted for Japanese 10 and Japanese 20.

Minor. A student fulfilling major field requirements under a Major Option in another field may present an area minor in East Asian Studies for the required minor. The requirement for the minor is a minimum of 18 credit hours selected from the following list. Courses must include History 40, History 41, and Theology 163. It is strongly recommended that the student also complete Japanese 10 and Japanese 20.

East Asian Studies Courses

Art 111 —Topics in the Theory and History of Art: East Asian Topics	3 Cr.
Communications 196 —Topics and Projects: East Asian Topics	1-3 Cr.
Economics 199 —Topics in Economics: East Asian Topics	3 Cr.
Geography 104 —Regional Geography of Asia	3 Cr.
History 40 —Traditional East Asian Civilization	3 Cr.
History 41 —Modern East Asian Civilization	3 Cr.
History 141 —History of Modern China	3 Cr.
History 142 —History of Modern Japan	3 Cr.
History 160 —Topics in History: East Asian Topics	3 Cr.
History 172 —Reading and Discussion Seminars: East Asian Topics	2-3 Cr.
Japanese 10 —Beginning Japanese I	4 Cr.
Japanese 20 —Beginning Japanese II	4 Cr.
Japanese 30 —Intermediate Japanese I	4 Cr.
Japanese 40 —Intermediate Japanese II	4 Cr.
Japanese 50 —Topics in Japanese Literature and Fine Arts	3 Cr.
Japanese 51 —Introduction to Japanese Literature	3 Cr.
Japanese 190 —Supervised Reading and Research in Japanese	1-4 Cr.
Music 121 —Pro-Seminar in Music: East Asian Topics	2-3 Cr.
Philosophy 190 —Philosophic Topics: East Asian Topics	3 Cr.
Political Science 154 —Politics of Developing States	3 Cr.
Political Science 175 —Seminar in Political Science: East Asian Topics	2-3 Cr.
Theology 100 —Topics in Theology: East Asian Topics	3 Cr.
Theology 163 —Religions of China and Japan	3 Cr.
Theology 164 —The Buddhist Tradition	3 Cr.
East Asia 175 —East Asian Senior Seminar	3 Cr.
Supervised Reading and Research —(with consent of Chair of Committee)	1-3 Cr.

Approval of Schedules. All students taking a major in East Asian Studies must have their schedules approved by the Chair of the Administrative Committee at the beginning of each semester.

East Asia 175. East Asian Senior Seminar.

Cr. 3. Research in the basic cultural themes of East Asia and their impact on the world today. Prerequisite: consent of the Chair of the Committee.



Economics

Professor Albers (Acting Chair); Associate Professors Bernard, Heinze, Henderson; Instructor Thornton.

Economics provides a logical, ordered way of looking at problems, issues and policies regarding the production, distribution and consumption of goods and services. It draws upon other social sciences and mathematics to confront a wide range of topics from environmental abuse to economic growth to business regulation and other governmental interactions with the commercial world. As economics in general deals with choice and decision making, it is of great value on both a personal and a professional level.

Economics majors have a wide range of career choices, including government or business economist, banking economist, investment analyst, trade association economist and others.

Major. Requirements for the major in Economics may be fulfilled by completion of one of the following programs.

General Economics Major. A minimum of 33 credit hours in Economics constitutes this major. Courses must include Economics 71, 72, 121, 122, 145 and one from among 150, 155 or 170. In addition, Mathematics [36, 52 or 72] and either General Management 50 or Mathematics 54 are required.

Economics and Computer Analysis Major. A minimum of 27 credit hours in Economics is required. Courses must include Economics 71, 72, 121, 122, 145 and one from among 150, 155 or 170. Computer science courses which must be completed are [47 and 48] or [57 and 58] and 94. Also required is a minor in Mathematics including courses [51, 71 or 75], [52, 72 or 76], 54 and 163 (or an approved alternative).

Minor. A minimum of 18 credit hours in economics constitutes a minor. Courses must include Economics 71, 72 and 12 hours of elective course work in economics. In addition, either General

Management 50 or Mathematics 54 is required.

Degree. Completion of the degree requirements of the College of Arts and Sciences with a major in Economics leads to the Bachelor of Arts degree.

Approval of Schedules. All students taking a major or minor in economics must have their schedules approved at the beginning of each semester.

71. Principles of Economics—Micro.*

Cr. 3. An introductory study of the central functions and problems of an economic system with emphasis on the determinants of consumer demand, producer supply and their interactions in the marketplace.

72. Principles of Economics—Macro.*

Cr. 3. An introduction to macro-economic analysis with emphasis on national income, consumer spending, investment, government and monetary aspects.

121. Intermediate Micro-Economic Theory.

Cr. 3. A study of the theoretical concepts and analytical techniques which economists employ to interpret the process of resource allocation under various systems of economic organization. Prerequisites: Economics 71 and 72.

122. Intermediate Macro-Economic Theory.

Cr. 3. A critical examination of theories of national income determination and of techniques for measuring and analyzing aggregate economic activity. Prerequisites: Economics 71 and 72.

123. Economic Fluctuations and Forecasting.

Cr. 3. Techniques of forecasting, utilizing national income and financial market statistics. Use of trend analysis techniques, multiple regression and econometric model building. Emphasis on applications of macroeconomics to both government and business policy making over time. Prerequisites: Economics 71 and 72, General Management 50 or equivalent.

124. Managerial Economics.

Cr. 3. A course in applied economics which emphasizes the use of microeconomics, statistics and mathematics in the process of making managerial decisions. Using problems and short case studies, topics such as estimating demand, cost, productivity and pricing policies are discussed. Prerequisites: Economics 71 and 72 and General Management 50 or equivalent.

126. International Economics.

Cr. 3. A study of the basis for the gains from international trade including the effects of growth and development on a nation's welfare. Attention is also given to the effects of tariffs

*Credit for Economics 71 and 72 may be earned through the College Level Examination Program subject examination in Introductory Economics.

and other restrictions to trade. Balance of payments accounting, foreign exchange markets and international monetary institutions are covered during the last part of the course. Prerequisites: Economics 71 and 72.

128. Economics of Developing Nations.

Cr. 3. An analysis of economic variables, both theoretical and institutional, which characterize developing nations. Emphasis is placed on cyclical poverty, allocation of resources and policy planning. Prerequisites: Economics 71 and 72 or consent of the instructor.

130. Industrial Organization.

Cr. 3. The analysis of the economic factors underlying the structure, conduct and performance of American industry. Prerequisites: Economics 71 and 72.

131. Government Regulation of Business.

Cr. 3. A survey of government regulations of private business, monopoly and unfair competition with emphasis on health and safety regulations, consumer and environmental protection. Utilizing basic economic analysis, attention will be given to how regulation affects individuals and firms, the costs and benefits to society of regulation and the alternatives to the present approaches to regulation. Prerequisites: Economics 71 and 72.

133. Economics of Labor.

Cr. 3. The approach of workers and employers to the problems of labor; the development of trade unions and collective government regulation of labor relationships, and an economic analysis of wage-employment problems. Prerequisites: Economics 71 and 72.

135. Urban Economic Problems.

Cr. 3. An examination of the regional and spatial characteristics of cities with emphasis on policies to correct urban problems. Transportation, housing, poverty and discrimination plus other substantive urban problems are analyzed and discussed. Prerequisites: Economics 71 and 72.

137. Public Finance.

Cr. 3. An analysis of the role of the government sector in a market economy. Causes of market failure, the efficient provision of public goods and the effects of taxation are considered as they relate to economic activity. Prerequisites: Economics 71 and 72.

139. Money and Banking.

Cr. 3. A study of the institutions, principles and problems of money and banking in the United States. Special attention is given to the basic elements of monetary theory and policies. Prerequisites: Economics 71 and 72.

145. Econometrics.

Cr. 3. The application of mathematical and statistical techniques to the analysis of economic issues. Development of simple and multiple regression as tools of analysis. Use of computer facilities and statistical programs to apply the tools to current economic data. Prerequisites: Economics 71 and 72, Mathematics 36 or 52 or 72 and General Management GLM 50 or equivalent.

150. Economic History of the United States.

Cr. 3. The history of the economic development of the United States from the colonial period to the present. Prerequisites: Economics 71 and 72.

155. Modern European Economic History.

Cr. 3. A history of the economic development of Western Europe from 1750 to the present. Emphasis is on the role of the industrial revolution and its impact on the modern person. Prerequisites: Economics 71 and 72.

160. Comparative Economic Systems.

Cr. 3. A comparative analysis of political theories and the economic systems that derive from those theories. The course focuses on those ideological assumptions that result in capitalism, socialism, anarchism, etc. as the solution to economic problems. Prerequisite: Economics 71 and 72 or consent of the instructor.

170. The History of Economic Thought.

Cr. 3. Economic thought in its historical development from the Mercantilists to the present day. Prerequisites: Economics 71 and 72 or consent of the instructor.

175. History of Socialist Economic Thought.

Cr. 3. The historical development of the economic ideas of the important socialists and schools of socialist thought.

190. Independent Study in Economics.

Cr. 1-3. Independent study to be approved by the Chair and the economics adviser.

197. Honors Work in Economics.

Cr. 3. See Honors Work, page 38.

198. Honors Candidacy in Economics.

Cr. 3. See Honors Work, page 38.

199. Topics in Economics.

Cr. 3. A course in which a special topic in economics is given intensive study. The topic varies from year to year. Prerequisites: Economics 71 and 72. Recommended for seniors and graduate students.

Education

Professors Kochendorfer, Speckhard (Chair); Associate Professors Reiser, Stiemke; Assistant Professors Michelsen, Riffel.

The Education Department offers programs of study leading to certification for elementary and secondary school teaching. In addition, the elementary teacher trainee may add specialization in reading, junior high/middle school, or special education (learning disabilities); the secondary teacher trainee may add a program leading to licensing in the junior high/middle school.

Accreditation. Valparaiso University is accredited by the National Council for Accreditation of Teacher Education to prepare elementary and secondary school teachers on the undergraduate level. It is a member of the American Association of Colleges for Teacher Education. It is accredited on the undergraduate and graduate levels by the Indiana Department of Public Instruction as a teacher education institution to meet certification requirements.

Certification. For the purposes of the Teacher Education Program and supervised teaching, the regulations apply which are in force at the time the student is approved for admission to the Teacher Education Program. All students who expect to teach and have not been admitted to the Teacher Education Program should consult the Pre-Education Adviser of this Department as early as possible to ascertain that certification requirements will be met. The mere completion of the prescribed courses outlined in the Education Department does not guarantee that the student will be recommended for certification or a teaching position.

A student who holds a bachelor's degree and is interested in qualifying for certification should consult the Chair of the Department.

Major. Only students preparing to meet elementary education certification requirements may major in education. Such students should complete the requirements for the Bachelor of Science in Education degree.

All secondary education students have an academic major in another department. They will also have a *teaching major*. The two are not necessarily the same. The teaching major consists of the area of concentration leading to certification and may include courses not applying to the academic major. For the specific requirements of the teaching major, consult the Pre-Education Adviser.

Minor. Only students preparing to meet secondary education certification requirements may minor in education. University degree requirements call for a major outside the field of education. Normally this academic major is in the primary teaching field. Such students may also have *teaching minors*, which are in subject matter areas outside the field of education, and which are not necessarily the same as academic minors. For specific requirements of a teaching minor, consult the Pre-Education Adviser.

ELEMENTARY EDUCATION

Completion of the degree requirements of the College of Arts and Sciences with a major in elementary education leads to the Bachelor of Science in Education degree. Undergraduate students who wish to teach in an elementary school should complete the requirements for this degree. This does not in itself qualify a student for a teacher's certificate or license in any given state.

Course work must include the following as a minimum:

1. Language Arts:

16 credit hours. Must include nine credit hours in written and oral communication and a course in children's literature, i.e., English 178.

2. Social Studies:

12 credit hours. Must include History of Western Thought and Society 5, a course in United States history, a course in world civilization and a course in Social Analysis selected from economics, geography, political science or sociology.

3. Conservation:

3 credit hours. One course; see Geography 60 or University Course 100, Human Environmental Biology.

4. Science:

8 credit hours. Must include a course in biology and one course in physical science selected from chemistry, physical geography or physics.

5. Mathematics:

9 credit hours. Must include mathematics course work specifically designed for elementary teachers, i.e., Mathematics 41-43 and 42-44.

6. Arts:

6 credit hours. Must include one course in music appreciation or methods of teaching music and one in art appreciation or art history or methods of teaching art.

7. Other subjects:

8 credit hours. Must include Psychology 51 or 52, 2 credit hours of Physical Education 1-49 and Special Education 140.

8. Freshman Seminar 5:

3 credit hours.

9. General Education Electives:

Elect from the above categories further courses to a total of 70 credit hours.

10. Theology:

9 credit hours.

11. University Course:

3 credit hours. Appropriate topics in this course may be counted toward meeting the requirements in conservation, arts or the general education electives.

12. Education:

36 credit hours. Must include 62, 111, 112, 113, 114, 116, 117, 163, [164 or 176], and [167 or SPED 149].

13. Other electives:

In addition to the above requirements, the student must present sufficient electives to achieve the 124 credit hours required for graduation.

Endorsements for teaching special education, reading and special subjects can be completed through special programs with requirements in addition to the above. A program leading to certification to teach junior high/middle school level can also be added. Specific requirements should be obtained from the Education Department.

Freshman students are advised by the Pre-Education Adviser. A recommended course program follows:

First Semester

English 5 or Freshman Seminar 5	3 Cr.
History 5 or Theology 5	3 Cr.
Natural Science	4 Cr.
Social Analysis or U.S. History	3 Cr.
Physical Education 1-49	1 Cr.
	14 Cr.

Second Semester

English 5 or Freshman Seminar 5	3 Cr.
History 5 or Theology 5	3 Cr.
Natural Science	4 Cr.
Social Analysis or U.S. History	3 Cr.
Psychology 51	3 Cr.
Physical Education 1-49	1 Cr.
	17 Cr.

A foreign language may be started in the freshman year by students who wish to concentrate in this area. Consult the Pre-Education Adviser for adjustments in schedule.

Sophomore students are advised by the Pre-Education Adviser. They should complete Education 62 during this year. Application for admission to the Teacher Education Program should be made during the first month of the second semester of the sophomore year.

Junior students who are admitted to the Teacher Education Program are advised by the Coordinator of Elementary Education. Application for admission to supervised teaching must be filed by March 1 of the junior year.

SECONDARY EDUCATION

Advising. Before admission to the Teacher Education Program, secondary school teacher candidates are asked to consult the Pre-Education Adviser of the Education Department concerning programs leading to recommendations for teacher certification. Once formally admitted to the Teacher Education Program, the student should periodically consult the Coordinator of Secondary Education.

Requirements. Undergraduate students preparing to teach in secondary schools should complete requirements for appropriate degrees in their academic majors as well as those for the teaching major field.

General Education certification requirements for all secondary teacher candidates, regardless of the degree sought, are given below. Students are responsible for meeting these **General Education requirements** as well as the University degree requirements.

1. Humanities—

22 credit hours

Written and oral communication, 9 Cr.

Literary studies or the equivalent, 4 Cr.

Foreign Language, Fine Arts-Literature, or other

Humanities, 6 Cr.

Theology, 3-9 Cr.

2. Life and Physical Sciences—

8 credit hours

The 8 Cr. are to be selected from at least two of the following areas: biology, chemistry, mathematics, physical geography and physics.

3. Social and Behavioral Sciences—

9 credit hours

The 9 Cr. are to be selected from at least two of the following areas: economics, geography, history, political science and sociology. Some states require all teachers to have a course in United States history; therefore, it is recommended that prospective teachers take at least one such course.

4. Psychology 51 (3 Cr.) or 52 (4 Cr.)

Professional Education requirements include:

- 1. Education 62, 3 Cr.** (preferably taken in the sophomore year)
- 2. Formal application and admission** to the Teacher Education Program in the first month of the second semester of the sophomore year (see below)
- 3. Education 105, 3 Cr.** (preferably taken in the junior year)
- 4. Education 174, 3 Cr.**
- 5. Special Education 141, 1 Cr., or Special Education 140, 3 Cr.** Some states require a three-credit course in learning exceptionalities; therefore, students are advised to check the certification requirements of states where they plan to teach before choosing between 141 and 140.
- 6. Formal application and admission** to the Professional Semester before March 1 of the year before the academic year in which the Professional Semester is to be taken
- 7. Completion of the Professional Semester.**
Courses included are:
Education 155, 4-5 Cr.
Education 156, 4 Cr.
Education 157, 8 Cr.
Education 191, 2 Cr.

Teaching Major and Teaching

Minor Requirements. A teaching major, or all-grade major, is required of all secondary teacher candidates. A teaching minor or a junior high/middle school certificate is highly recommended. Students are strongly urged to take or audit the Special Methods 191 course in a teaching minor or a second teaching major. Note that a teaching major is not the same as an academic major in that it may have additional requirements; similarly, a teaching minor may have requirements beyond those of an academic minor.

Credits earned by passing the appropriate examinations and noted on a student's transcript may be used to meet certification requirements.

Specific requirements for teaching majors and minors can be obtained from the Pre-Education Adviser, the Coordinator of Secondary Education or the major adviser.

Admission to the Teacher

Education Program. To be admitted to this program, a student must submit a written application to the Education Department. This application should be made in the first month of the second semester of the sophomore year. Applications are accepted only in January and September.

Action on each application (acceptance, conditional acceptance or denial) is taken by the Admissions Committee of the Education Department and is based on the following criteria:

1. Grade point average.

Normally an applicant must have a standing of 2.25 or higher in all course work taken at Valparaiso University, a minimum of 12 credit hours at this University, and at least 2.00 in all course work taken in the Education Department and in all teaching fields. Post-baccalaureate students must have a standing of 2.75 in all course work (12 credit hours minimum) taken at Valparaiso University after earning the bachelor's degree.

2. Basic skills.

An applicant must have obtained a grade point average of 2.00 or better in required composition courses and a grade of C or better in the required speech course at Valparaiso University. The applicant must also pass basic skills proficiency tests. Students are expected to maintain acceptable standards in communication skills; proficiency is monitored by professors in education courses. If deficiencies in written or oral communication are noted, the applicant must take remedial steps under the direction of the Department.

3. Health.

An applicant shall be free of serious mental or physical health problems that might impair future teaching effectiveness.

4. Character.

An applicant must have shown the social and emotional maturity, moral character, responsibility and dependability necessary for success in the teaching profession.

5. Speech and hearing test.

An applicant must complete a speech and hearing screening examination.

6. Faculty recommendations.

Positive recommendations from two faculty members must be obtained by each applicant. One of these must be obtained from the Foundations of Education instructor. The other should be obtained from the major adviser.

When applicants are noted as questionable on any of these criteria, they may be asked to meet with an admissions subcommittee before final action is taken. Appeals from the decisions of the Admissions Committee should be

submitted in writing and directed to the Education Department through its Chair.

Professional Semester. This semester is required of all candidates who wish to be recommended for an initial teaching certificate. This semester includes the methods, principles and student teaching courses required to meet standards for certification. During this semester the student should enroll only in courses approved for the Professional Semester.

Admission to the Professional Semester. Preliminary application for admission to the Professional Semester (including Supervised Teaching) must be filed and completed in person with the Coordinator of Elementary Education or the Coordinator of Secondary Education by March 1 of the spring semester before the academic year in which the student teaching is to be done. To be eligible for supervised teaching, the student must meet the following criteria:

1. Official admission to the Teacher Education Program.
2. Grade point average since admission to the Teacher Education Program of at least 2.25 overall and in all teaching fields.
3. Continued demonstration in class of facility in oral and written communication. The applicant must have obtained a grade point average of 2.0 or better in courses used to meet the written expression requirement.
4. Completion of at least 12 credit hours at Valparaiso University of which 3 credit hours must be in education.
5. Senior standing. The applicant must be within two semesters and one summer of graduation.
6. Evidence of the social and emotional maturity, moral character, responsibility and dependability necessary for success in the teaching profession.
7. Secondary student teaching candidates must have completed Psychology 51 or 52, have earned a standing of 2.25 or higher in all education courses completed and have received a written recommendation from the major adviser to take the Professional Semester. If a teaching minor is to be obtained, written recommendation from the Chair of the department in which the minor is taken must be received. Students are strongly urged to take or audit the Special Methods 191 course in the teaching minor area.
8. Elementary student teaching candidates must have earned a standing of 2.25 or higher in all course work in education.
9. Obtain a 'C' or better in each of the professional education courses taken in the professional semester prior to supervised teaching to be eligible to begin supervised teaching.

Placement of Student Teachers.

The placement and the direction of supervised teaching experiences are the responsibilities of the Coordinator of

School Field Experience. Approved elementary and secondary student teachers are assigned to selected schools in Northwest Indiana.

Placement of Graduating Teachers. The Teacher Placement Office gives assistance to beginning and experienced teacher candidates who have completed requirements for certification. All candidates must file their credentials with this office before graduation.

Students who complete their undergraduate training at Valparaiso University are entitled to use the Teacher Placement services at no cost to the student until the end of the Teacher Placement year which comes after graduation or the completion of the professional semester, whichever comes last. The teacher placement year is from October 1 to September 30.

A ten dollar fee is charged each teacher candidate who wishes to use the Teacher Placement service after the expiration of the free service time. This reinstates the student until the end of the then current teacher placement year. This fee is waived for those students completing Valparaiso University's teacher training program who have not received an offer of an initial position since completion of their program.

62. Foundations of Education.

Cr. 3. A study of the historical, sociological and philosophical foundations of American Education. Current issues and trends in education. Readings and activities to increase cultural and ethnic awareness. Field activities.

96. Educational Psychology.

Cr. 3. A course relating the principles and theories of psychology and the results of research to teaching and learning. Prerequisite: Psychology 51 or 52. Not open to majors or minors in education.

105. Orientation to Secondary Teaching.

2+3, Cr. 3. A course designed to provide the prospective secondary or middle school teacher with the basic rationale and supportive field experiences for an informed decision about teaching as a career. Academic course work includes topics in secondary school organization, curriculum, statistics and school law in preparation for taking the professional semester. The field experiences include a minimum of forty hours of practical involvement in activities in a secondary school. Prerequisites: Education 62 and application for admission to Teacher Education Program.

Note: No undergraduate student is admitted to any course beyond Education 105 unless admitted to the Teacher

Education Program or permitted to do so by the Chair of the Education Department.

111. Principles of Elementary Education.

Cr. 3. This course is designed to (1) study the organization of instruction, classroom assignment, measurement and evaluation and the legal rights and responsibilities of the teacher, (2) become reacquainted with elementary classrooms from varied perspectives and (3) re-examine the purposes of education, schooling, instruction and the role of the professional teacher.

112. Methods of Teaching Social Studies in the Elementary School.

Cr. 2. This course is designed to (1) study the historical development and present trends of the subject area of social studies, (2) explore the role of social studies in school curriculum, (3) examine current methods and materials unique to social studies and (4) plan and implement a social studies unit.

113. Methods of Science Education.

Cr. 2. This course will (1) explore the basic orientations that will have survival value in our world, (2) study the philosophy of science education with an understanding of three methods used for science instruction: Discovery Model, Inquiry Model, and Experiential Model.

114. Methods of Teaching Mathematics in the Elementary School.

Cr. 2. A study of techniques and instructional materials for teaching mathematics in the elementary school. Topics include sequencing, diagnosis and remediation of errors, and use of concrete materials.

116. Psychological Foundations of Elementary Education.

Cr. 4. A study based on psychological research and theory to aid teachers in guiding the learning, development and evaluation of children. Includes physical, mental and emotional development of the child through adolescence and motivation, retention and transfer of learning. Involves directed classroom observation. Prerequisite: Psychology 51.

117. Introduction to Reading in the Elementary School.

Cr. 4. An introductory course in which lectures, demonstrations and discussions place emphasis on the reading process, reading skills and teaching techniques. Practice in diagnosis and teaching reading.

115. Principles and General Methods of Teaching in the Secondary Schools.

Cr. 4-5. A study of the principles, methods, techniques and materials involved in teaching in the secondary and middle schools and the development of human relation skills. The fifth credit provides opportunity for all-grade majors (Art, Music, Physical Education) to study general methods, curriculum and organization of the elementary school. This course is restricted to students enrolled in the Professional Semester in Secondary Education.

156. Psychological Foundations of Secondary Education.

Cr. 4. A course based on psychological research and theory to aid teachers in guiding the learning and development of children and adolescents. This course is restricted to students enrolled in the Professional Semester in Secondary Education. Prerequisite: Psychology 51 or 52.

157. Supervised Teaching in the Secondary School Subjects.

Cr. 8. Each student is assigned to a middle or secondary school for laboratory experiences, which includes at least nine weeks of full-time classroom observation, classroom teaching and related activities. Prerequisites: senior standing and concurrent enrollment in the Professional Semester. See *Admission to the Professional Semester* above for conditions of eligibility. Students enrolled in this course may not carry a load of more than 19 credit hours. S/U grade.

163. Methods of Teaching Language Arts in the Elementary School.

Cr. 2. A study of the principles, content, curriculum, methods and techniques involved in teaching the language arts in the elementary school.

164. Methods of Teaching Reading in the Elementary School.

Cr. 2. A study of the organization and techniques of teaching reading in the elementary school.

167. Supervised Teaching in the Elementary Grades.

Cr. 12. This course gives the student opportunities for observation, actual classroom teaching and participation in related activities in elementary schools under the direction of the supervising teacher and the University supervisor. Students are expected to give full time to this course for a minimum of nine weeks of the semester. Prerequisites: senior standing and concurrent enrollment in the Professional Semester. See *Admission to the Professional Semester* above for conditions of eligibility. Students enrolled in this course may not carry a load of more than 18 credit hours. S/U grade.

174 (274). Reading in the Content Areas.

Cr. 3. This course is designed to enable prospective teachers of subject matter content to acquire knowledge, skills, and behaviors necessary to help pupils "read to learn" in middle school through high school. Specific techniques to develop competencies in explicit instruction, textbook evaluation, and student assessment are emphasized.

176 (276). Foundations of Language and Reading.

Cr. 3. This course of lectures includes the interrelationship between thought and language processes, the basic elements of the reading process, diagnostic tools in reading assessment and sociocultural implications of the reading process.

178 (278). Kindergarten Education.

Cr. 3. This course deals with the curriculum, teaching techniques and materials used in the nursery school and kindergarten. Special

emphasis is given to the education needs of the pre-school child.

- 180 (280). Introduction to Educational Media.**
2+2, Cr. 3. An introduction into the ways of effective selection and utilization of media, both material and equipment. The course includes laboratory experience in the production of materials and equipment operation in different media.

- 182 (282). Educational Measurement.**
Cr. 3. A course dealing with theory of measurement, interpretation of measurement data and testing in relation to pupil achievement and guidance.

- 184 (284). Reading Disabilities.**
Cr. 3. Lectures and demonstrations on the general nature of identification, diagnosis and classification of individuals with reading problems at all ages and levels of instruction. Prerequisite: six credit hours of course work in reading.

- 185 (285). The Junior High/Middle School.**
Cr. 3. A study of the development, organization and curriculum of junior high and middle schools with emphasis on the unique societal and educational roles played by these institutions.

- 186 (286). Junior High/Middle School Teaching: Principles and Methods.**
Cr. 3. A study of the principles, methods and materials involved in teaching in junior high and middle schools. Individualized instruction and interdisciplinary learning are emphasized.

- 187 (287). Practicum in Junior High/ Middle School.**
Cr. 3. Each student is assigned a minimum of 80 hours of supervised field experiences in a junior high or middle school. The experience includes planning, intermural athletic, and home room activities such as peer counseling, individual guidance, values clarification, exploratory courses and recreational events, working with students on individualized study projects and study skills. Prerequisites: Education 185 (285) and 186 (286) (may be taken concurrently).

- 189 (289). Practicum in Corrective Reading.**
Cr. 3. A laboratory experience which provides practice with primary, elementary, middle and junior high school children whose reading disabilities are mild to moderate. Training in evaluating reading performance, planning appropriate programs and implementing instructional strategies. Prerequisite: Education 184 or equivalent.

- 191. Special Methods in the Academic Courses in Secondary Education.**

Cr. 2. This course is administered by the Education Department. It is given in the various departments of the College of Arts and Sciences under the following titles:

The Teaching of Communication
The Teaching of English
The Teaching of Foreign Languages
The Teaching of Mathematics
The Teaching of Music
The Teaching of Natural Sciences
The Teaching of Physical Education

The Teaching of Social Studies

The Teaching of Visual Arts

- 195. Independent Study in Education.**

Cr. 1-3. Independent work to be done in a specific area of education as agreed upon by the student and faculty adviser. Proposals must be approved by the Chair of the Department.

- 199 (299). Current Problems in Education.**

Cr. 1-3. An intensive study of an area of education. Subtitles, amount of credit and content depend on instructor's choice and student interest.

SPECIAL EDUCATION

- 140 (240). Learning Exceptionalities.**

Cr. 3. A course designed to introduce the student to the needs of exceptional children and the techniques of educating them. Required of all Elementary Education students.

- 141. Learning Exceptionalities in the Secondary School.**

Cr. 1. A course designed to introduce the student to the needs of exceptional adolescents and to appropriate methods of teaching these students. Required of all Secondary Education students unless they choose 140 instead. The student should check the requirements of the state in which he plans to teach.

- 142. Practicum in Learning Disabilities.**

Cr. 3. This course is designed to provide a minimum of 80 hours of field experience to prospective special education (learning disabilities) teachers to inform them about teaching in this area of exceptionality. This practicum emphasizes directed observation of diagnostic, teaching and management techniques. Prerequisite: admission to teacher education. S/U grade.

- 143. Introduction to Learning Disabilities.**

Cr. 3. A course designed to give the student fundamentals in the theoretical models of learning disabilities with emphasis on the characteristics and educational needs of the learning-disabled child. Prerequisite: admission to Teacher Education Program for Special Education.

- 144. The Diagnosis of Learning Disabilities.**

Cr. 3. This course deals with the development of competencies in the diagnosis of specific learning disabilities. The emphasis is on theoretical models of diagnosis, screening and testing instruments as well as on interpretation of education assessment data. Prerequisite: Special Education 143.

- 145. The Remediation of Learning Disabilities.**

Cr. 3. The emphasis of this course is on the development of diagnostic prescriptive models, corrective strategies and teacher-made corrective materials in order to develop competencies in the various approaches to correction of specific learning disabilities. Prerequisite: Special Education 144 (may be taken concurrently).

- 149. Supervised Teaching in Elementary and Special Education Classrooms.**

Cr. 12. This course combines into one semester the experience of observation, classroom

teaching and participation in related activities in both elementary school settings and special education (learning disabilities) classrooms. Under the direction of the cooperating teachers and University supervisors, the students student-teach for six weeks in an elementary classroom followed by six weeks in the special education (learning disabilities) classroom. Prerequisites: senior standing, SE 145, and admission to the professional semester. S/U grade.

195. Independent Study in Special Education.

Cr. 1-3. Independent work to be done in a specific area of special education as agreed upon by the student and faculty adviser. Proposals must be approved before registration by the Chair of the Department.

199 (299). Current Problems in Special Education.

Cr. 1-3. An intensive study of an area of special education. Subtitles, amount of credit and content depend on instructor's choice and student interest.



English

Professors Feaster, A. G. Meyer, Phipps, Risley, Wegman; Associate Professors Cunningham, G. Eifrig, Hall, Juneja, Maxwell, Mullen, Sommer, Sponberg, Uehling (Chair); Assistant Professors Byrne, Sandock, Turner, Zarzana; Instructor Pappas.

The English Department offers a wide variety of courses for both English majors and other students. Courses offered by the Department help students use the English language effectively and sensitively and help them develop their capacity to enjoy and understand imaginative literature. Many non-English majors enroll in upper division courses and, as a consequence, students can expect any given class to display a broad spectrum of interests and backgrounds. Relatively small class size allows students to develop a close relationship with professors and allows them to develop their analytical and expressive skills through writing and discussion. In addition to preparing a student for graduate work or for teaching in the secondary schools, an English major also provides excellent training for numerous careers and professions. Many schools of medicine, law and theology report that an English major provides a highly desirable background for acceptance into their programs. Business and government annually employ English majors for positions in personnel, sales and marketing, public relations, systems analysis and advertising, as well as editing and writing. The ability to read and understand complex material, to write and speak precisely, to think clearly and thoroughly remains in high demand in all sections of our society.

Students with an interest in English are invited to join the English Club.

Major. A major requires a minimum of 27 credit hours in English courses beyond the general education requirements and numbered 100 or above. Courses must include English 100 and 187; three courses selected from 109, 120, 130, 150, and 156; one from 160, 170, and 175; and either 101 or 102.

Minor. A minor requires a minimum of 15 credit hours in English courses beyond the general education requirement and

numbered 100 or above. Courses must include either English 100 or 187; one course selected from 109, 120, 130, 150, or 156; one selected from 160, 170, and 175; and either 101 or 102.

Minor in Writing. Students who elect a minor in writing must complete a total of at least 15 credit hours in writing or language-related courses. Courses must include either English 57 or 58; 131; 141 or 142 or 143; two of the following: 100, 121, 123, 124, 194, and Communication 152. Students who elect to take both 121 and 131 must take 121 first. In some instances students may apply internships and cooperative education toward fulfillment of requirements for the minor in writing.

Degree. Completion of the degree requirements of the College of Arts and Sciences with a major in English leads to the Bachelor of Arts degree.

Approval of Schedules. All students taking a major or a minor in English should make an appointment with the Chair of the Department. Students should bring their cumulative grade report copies (from the registrar's office) and their current adviser's files. The Chair will explain the offerings and programs of the Department and give each student a bulletin which provides more detail about courses and faculty than is possible in this catalog.

All students taking a major or minor in English must have their schedules approved by their English advisers at registration. This consultation assures students of places in courses they need and contributes to orderly progress toward the degree.

Advising. The Chair of the Department will introduce all students to the professor who will be their adviser as long as they remain a major in the Department. It is the student's responsibility to confer regularly with the adviser about course selection, career planning and related matters. It is the adviser's responsibility to help students make a frank and realistic assessment of academic options and their consequences.

Cooperative Education. In cases where it will clearly augment their classroom education, qualified students may engage in paid work experiences which will also receive credit. No more

than six credits may be applied toward the minimum major requirements. All projects must receive prior approval from the Department Chair and must be monitored by a member of the English Department faculty. A report from the sponsoring agency is required, as well as a written report by the student. (For further information, refer to Cooperative Education, College of Arts and Sciences, p. 39.)

2. English for Foreign Students.

3+1, Cr. 3. A course in English grammar and basic composition skills open only to students whose native language is not English.

5. Exposition and Argument.#

Cr. 3. An intensive course in the writing of expository and argumentative prose with emphasis upon coherent organization, the logical progression of thought and the effective use of language.

25. Literary Studies.†

Cr. 4. Core readings are based on several major units corresponding to significant periods of literary history. Presented with their historical setting and supplemented by numerous shorter pieces, these readings build on and extend the students' awareness of their cultural tradition. General lectures by professors from various disciplines demonstrate the contexts from which literature arises. The course provides instruction and practice in the writing of careful critical analyses of texts. Prerequisite: English 2 or 5.

31. Film Aesthetics.

Cr. 3. This course considers the possibilities and limitations of aesthetic valuation of film. Films are studied intensively from the viewpoint of narrative technique, image, camera movement, sound, social ideology and historical significance. Aesthetic impact is weighed against ethical issues. Representative films studied are Renoir's "Rules of the Game," Ford's "The Searchers" and Riefenstahl's "Triumph of the Will." Offered in alternate years. This course may be used to fulfill the Fine Arts/Fine Arts-Literature component of general education requirements.

Note: English [2 or 5] and 25 are prerequisites for the following courses except English 65.

57. Business Communication.

Cr. 3. A detailed study of business communication. Includes analysis and practice in a variety of messages used to communicate in business and industry: letters, oral reports and informal reports. Emphasizes the fundamentals of appearance, style and language, tone and psychology of effective business communication.

58. Technical Communication.

Cr. 3. This course trains engineering and science students to write and talk about their design and research problems in terms that satisfy a specialist and also enable a non-specialist to understand what the problem is and how it was (or can be) solved. Students prepare and present a series of short explanatory papers, some letters and oral presentations leading up to a final formal report and oral presentation.

65. Studies in Literature and the Other Arts.

Cr. 3. Courses offered under various titles will examine the relationships between literature and the fine arts. Topics might include the examination of a particular theme or concept as it is treated in the various arts or the analysis of parallel technical developments in the arts during a specific historical period. Fulfills the Fine Arts or Fine Arts-Literature requirement.

100 (200). Methods of Literary Criticism and Research.

Cr. 3. Designed to give students practical experience in the theories and methods of modern literary scholarship and criticism. The course aims to acquaint students with the presuppositions about literature which underlie critical writing and thus to provide standards for evaluating critical and scholarly works. It also provides intensive training in the analysis of literary texts. Required for English majors.

101. American Literature I.

Cr. 3. A study of selected works of major American writers from the Colonial period to the Civil War.

102. American Literature II.

Cr. 3. A study of selected works of major American writers (including minority and women writers) from the Civil War to the present day.

105. Masterpieces of World Literature.

Cr. 3. A study of major works of the Occident and Orient from ancient times to the present day.

109 (209). Literature of the Medieval Period.

Cr. 3. A survey of medieval English lyric, ballad, narrative, drama, and romance (including Chaucer), with attention to intellectual, religious, and social background materials.

110 (210). Shakespeare.

Cr. 3. Close readings of representative plays: histories, comedies and tragedies.

120 (220). Literature of the Sixteenth and Seventeenth Centuries.

Cr. 3. An intensive survey of the poetry, prose, and drama of the English Renaissance, excluding Shakespeare, with attention to the historical and cultural backgrounds of the period. Representative writers may include More, Sidney, Spenser, Jonson, Donne, and Milton.

#Credit for English 5 may be earned through the College Level Examination Program general examination in English or the subject area examination in English Composition, or through the Advanced Placement examination offered by the College Entrance Examination Board. Students with SAT Verbal scores of 600 or above or the equivalent ACT score may receive credit for English 5 upon submission of a writing sample judged acceptable by the Department.

†Credit for English 25 may be earned through the College Level Examination Program subject examination in Analysis and Interpretation of Literature or through the Advanced Placement examination offered by the College Entrance Examination Board.

121. Intermediate Composition.

Cr. 3. Students examine and practice procedures common to all kinds of academic and professional writing. Particular attention is given to editing, revising, and evaluating prose forms. Not open to students who have taken English 131.

123. Short Story Writing.

Cr. 3. A workshop in the various techniques of writing short fiction. English majors, as well as other students, may take this course on the S/U basis.

124. Poetry Writing.

Cr. 3. A workshop in the various techniques of writing poetry. English majors, as well as other students may take this course on the S/U basis.

130 (230). Literature of the Restoration and Eighteenth Century.

Cr. 3. An intensive survey of English poetry, fiction, non-fiction prose, and drama from 1660-1785, with attention to the historical and cultural background of the period. Representative writers may include Dryden, Swift, Pope, Fielding, Johnson, and Sheridan.

131. Advanced Composition.

Cr. 3. A course for students who have mastered fundamental writing skills and are prepared to study and practice the writing process in a more sophisticated and rigorous fashion. The course considers how to generate and organize ideas, how to adapt writing to various audiences and purposes, and how to revise, edit, and polish writing—components of a developing and mature style.

141 (241). History of the English Language.

Cr. 3. An introduction to the development of modern English from Indo-European with emphasis upon structure and vocabulary.

142 (242). Modern English Grammar.

Cr. 3. An introduction to such recent linguistic developments as structural grammar and transformational-generative grammar.

143 (243). Introduction to Linguistics.

Cr. 3. A general introduction to the theory and methodology of linguistics. The course includes descriptive and historical linguistics, basic notions of grammatical theory and exploration of some of the relations of linguistics to other branches of knowledge. The presentation of general principles is supplemented by practical problems in linguistic analysis.

150 (250). Literature of the Nineteenth Century.

Cr. 3. A survey of British poetry and prose of the Romantic and Victorian eras, with reference to the context of British and European social and political history. Major writers may include Wordsworth, Coleridge, Keats, Hazlitt, Scott, Carlyle, Tennyson, Browning, Arnold, Dickens, Newman, and Hardy.

156 (256). The Novel.

Cr. 3. A study of representative English novels of the eighteenth and nineteenth centuries, with discussion of the social background.

160 (260). Modern Drama.

Cr. 3. A study of plays typical of the various phases of the development of British and American drama after 1870, with some attention to related Continental drama.

165. Studies in American Literature.*

Cr. 3. A study of a significant movement in American literature, such as Transcendentalism, Romanticism, Naturalism and Realism, or a group of writers related regionally, ethnically or in some other special way.

170 (270). Modern Fiction.

Cr. 3. Readings of representative works of the most important British and American novelists of the twentieth century, with emphasis on various theories of fiction dominant during the period.

175 (275). Modern Poetry.

Cr. 3. Readings in selected modern poets and their forerunners, especially the French Symbolists. The British and American poets included may range from Yeats and T.S. Eliot to Auden, Robert Lowell and other contemporary figures.

178. Literature for Children.

Cr. 3. A survey, by types, of distinguished literature for children, with emphasis on developing analytical and evaluative techniques. Introduction to bibliographical aids, review media and research. Required of elementary education majors.

179 (279). Literature for Adolescents.

Cr. 3. A survey, by types, of distinguished literature suitable for students in secondary schools. Emphasis on the reading of selected books representing the wide range of literature for adolescents, and the developing of analytical and evaluative techniques. Introduction to bibliographical aids, review media, and current research in the field.

181. Cooperative Education in English I.

Cr. 0.5-3. Professional work experience which clearly augments the student's classroom education. Written report required. Prerequisites: English 131 and approval of the Chair of the Department.

182-183. Cooperative Education in English II-III.

Cr. 0.5-3. Continuation of English 181. Prerequisite: English 181. May be repeated beyond 183 for additional credit.

187. Seminar in English.

Cr. 3. Designed for juniors and seniors interested in active participation, the seminar encourages independent thought and research, and relies on free discussion rather than lectures. Some recent topics:

The Aesthetic Movement from Poe to Yeats
and Mann
Satire

All courses in English marked by an asterisk () may vary in content and in writers assigned, depending on the instructor and the year given. Such courses may be taken twice for credit, provided that the topics are different or that there is no significant overlapping in the reading lists.

Contemporary British Novelists
Anglo-Irish Literature
Enrollment limited to 15 students.
Required for English majors.

191. The Teaching of English.

Cr. 2. (See Education 191.) A study of methods of teaching English in secondary school. Prerequisite: admission to Supervised Teaching. This course may not be counted toward a major or minor in English.

194. Independent Study in English.

Cr. 3. Designed to provide advanced students an opportunity to do serious research on a topic which is not covered in any regularly scheduled course offered by the English Department. In advance of the semester in which the student plans to undertake his

project, he must arrange for a tutor to direct that project and secure approval for it from the English Department Committee on Honors and Independent Study.

195 (295). Topics in Literature.*

Cr. 2 (seven week course) -3. An open-topic course, which may concern a single writer or group of writers; a literary type or theme; a contemporary art form (e.g., development of the cinema), or an aspect of modern popular culture (e.g., science fiction and fantasy).

197. Honors Work in English Literature.

Cr. 3. See Honors Work page 38.

198. Honors Candidacy in English Literature.

Cr. 3. See Honors Work page 38.



All courses in English marked by an asterisk () may vary in content and in writers assigned, depending on the instructor and the year given. Such courses may be taken twice for credit, provided that the topics are different or that there is no significant overlapping in the reading lists.

Film Studies

Administrative Committee:
Associate Professor Maxwell
(English, Chair); Professors
Falkenstein (Foreign Languages) and
Trost (Political Science); Associate
Professors Combs (Political Science),
Lee (Christ College), Schoppa
(History), Sommer (English) and
Sponberg (English)

A minor in Film Studies may be presented in partial fulfillment of the major field requirements for the Bachelor of Arts degree under a Major Option.

Objectives. The film studies minor offers an opportunity to discover the place and significance of an important twentieth century art which has also been a social force. Film can be studied for its artistry, its historical development, its influence on human perceptions of the world and its relation to such subjects as national cultures, technology, politics, mass media, theater and religion. The minor in Film Studies allows the small scale but concentrated study of one important art, and through it, modern times.

Requirements. At least 15 credit hours in film studies courses constitute a minor.

Area requirements:
 English 31 3 Cr.

At least one course from each of the following three areas 9 Cr.

Film and Literature
 Film and Society
 History of Film

A second course from one of these three areas may be counted toward the minor. Other options are Art 63 (3 Cr.), or a special topics course (e.g. Film and Religion) approved by the Chair of the Committee.

Film and Literature Area. Offered by the Department of English and the Department of Foreign Languages and Literatures:

English 195, French 50, German 50, Greek 50, Latin 50, Spanish 50.

These are special topics courses which from time to time offer appropriate topics, such as Shakespeare on Film, The Novel and Film, Storytelling in Film and Literature. These courses scrutinize both similarities and differences in the handling of a theme and show how literary analysis may be used in understanding the cinema.

Film and Society Area. Offered by the Department of History and the Department of Political Science:

History 172, Political Science 175.

Recent topics dealt with in these courses are The Vietnam War through Film and Literature, Film and Politics. These courses consider film from the viewpoint of the historian and the social scientist, emphasizing the use of social-historical themes in film and the effect of film on society and history.

History of Film Area. Offered by the Department of Foreign Languages and Literatures, the Department of History and Christ College:

German 65, History 160, Christ College 140, Christ College 160.

Topics such as History of the German Film, History of the American Film and Film in Asia are offered. These courses consider the historical development of film art and the film industry in the context of one or more national traditions of cinema.



Foreign Languages and Literatures

Professors Falkenstein, Helms, H. Peters, J. Peters; Associate Professor Kumpf; Assistant Professors S. Baeppler, S. DeMaris (Chair), Gilbert, Ketterer, Toledo; Instructor Duvick; Language Laboratory Director Olsen.

Acquaintance with a foreign language and a foreign culture has a profound effect on the way individuals view their own language and their own heritage. Pursuit of studies in this area raises the sights of individuals from the level of provincialism to the level of broadened human concern and is, therefore, a vital part of students' experience, regardless of their fields of specialization. Students, while thus deepening their backgrounds in the humanities, at the same time acquire a working knowledge of another language, a practical skill valued in many of today's professions.

A major in a foreign language may lead to such careers as foreign trade, airlines management, international banking, foreign news correspondent, publishing, teaching, the ministry, para-legal professions, social work among the non-English speaking, translation, tourism or government service.

Objectives. In the lower division courses, numbered below 100, the Department has the following objectives:
Modern Foreign Languages

1. To teach the fundamental skills of reading, writing, understanding and speaking in a foreign language.
2. To provide students with a solid basis for further study of the language, literature and civilization.
3. To enhance students' awareness of language in general: its structures, uses and relationship to the culture of the lands in which the language is spoken.

Classical Languages and Hebrew

1. To read the original text with understanding.
2. To study the ideas, history and culture that are the basis of Western Civilization.

In the upper division courses, numbered 100 to 199, the objectives are to continue the work done in the lower division, to prepare students for graduate study, for teaching or for entering careers which

demand use of a foreign language; more specifically:

1. To refine the skills acquired in the lower division courses.
2. To study literature both as individual works of art and as a reflection of the civilization and era from which it sprang.
3. To study a foreign civilization and its development.
4. To offer such specialized work as is necessary for those who plan to teach or those who would use foreign language in their careers.

Through University programs and affiliations, an opportunity to study abroad is afforded students of any of the foreign languages. See pages 11-13 for details.

The Department of Foreign Languages and Literatures cooperates with the Departments of Economics, Geography, History and Political Science in a program in International Economics and Cultural Affairs designed for students considering careers in the fields of international commerce or government service. See page 93 for details.

Placement and Special Credit.

Before beginning the study of a foreign language already studied in high school, students are required to take a placement examination administered by this Department.

Students who wish to begin languages they have not studied before must register for course 10 of those languages.

Students who have completed a second year of a foreign language in high school will not be granted credit for level 10 in that language.

Students who are placed directly into level 30 of a language shall receive 4 credit hours for level 20 and 4 credit hours for level 30 by passing course 30.

Students who are placed directly into an advanced level course in a language shall receive 4 credit hours for level 20, 4 credit hours for level 30 and the credit hours for the advanced course by passing the advanced course.

Advanced Placement by

Examination. It is possible to fulfill the foreign language general education requirement through the Advanced Placement Program of the College

Entrance Examination Board or through the College Level Examination Program.

Special Exception to Foreign Language Requirement. Foreign students whose native language is not English and who are studying on a non-immigrant visa are exempt from the foreign language general education requirement provided that they fulfill the general education requirements in English.

Degree. Completion of the degree requirements of the College of Arts and Sciences with a major in Classics, French, German, Greek, Latin or Spanish leads to the degree, Bachelor of Arts.

Cooperative Education. Qualified students may participate in the Cooperative Education program, subject to the availability of suitable positions. During the time of their employment, students are financially reimbursed by the cooperating employer and also receive credit toward the Foreign Language major. Eligible students are junior or senior Foreign Language majors who have completed 12 credits beyond the 30 level of their language with a cumulative grade point average of 3.0 in their foreign language courses. Cooperative Education may be repeated for up to a total of 12 credit hours, only 3 of which may be counted toward meeting the minimum requirements of the major. (For further information, refer to Cooperative Education, College of Arts and Sciences, page 39.)

Approval of Schedules. All students who take a major or minor in the Department and all students who plan to teach a foreign language must have their schedules approved by the Chair of the Department at the beginning of each semester. A list of specific courses required of teaching majors and minors is available from the Chair of the Education Department.

French

Major. A minimum of 20 credit hours in French beyond French 30 constitutes a major. Courses must include French 111 and 120.

Minor. A minimum of 10 credit hours beyond French 30 constitutes a minor.

Teaching Programs. Students who plan to teach French in secondary schools with a major or minor in French should

consult the Chair of the Department and the Education Department for specific requirements.

The Roger and Hazel Guillaumant Award. See page 19 for details.

10. First Semester French.

4+2, Cr. 4. A course designed to give the student the essentials of French. Credit may not be counted for graduation by a student who has completed a second year French course in high school.

20. Second Semester French.

4+2, Cr. 4. A continuation of French 10. Prerequisite: French 10 or equivalent.

30. Intermediate French.

Cr. 4. A course to emphasize the acquisition of verbal skills; includes reading of a modern French literary text, review of grammar and vocabulary building. Prerequisite: French 20 or equivalent.

50. Topics in French Literature and the Fine Arts.

Cr. 3. Study of selected works of French literature in English translation and of their correlates in the visual arts and/or music. No knowledge of French required. May not be counted toward a major or minor in French.

Note: French 30 is a prerequisite for all of the following courses; prerequisites may be waived by the Chair of the Department.

109. French Phonetics.

Cr. 3. A study of the principles of French phonetics with special emphasis on the difficulties encountered by American students. Much practical training in the laboratory.

111. French Composition and Conversation I.

Cr. 4. Practice in speaking, understanding and writing everyday French. Use of practical vocabulary and common idioms. May be repeated for credit at the Paris Center or similarly-accredited programs.

112. French Composition and Conversation II.

Cr. 4. An intensive course in speaking, listening and writing, from the colloquial to the scholarly. Prerequisite: French 111 or 120. May be repeated for credit at the Paris Center or similarly-accredited programs.

114. Contemporary French Language and Communication.

Cr. 4. French newspapers, magazines, radio, television and films are used as a basis to build more advanced language skills and to familiarize the student with modern-day France. Prerequisite: French 111 or 120.

116. Professional French.

Cr. 2-3. A study of the French language as it is used in the international business world, including writing of business letters and general commercial terminology. Prerequisite: French 111 or 120.

117. Advanced French Translation.

Cr. 2-3. Instruction in the techniques of translation from and into French of commercial,

practical, technical, official and literary texts.
Prerequisite: French 111 or 120.

118. Advanced French Composition and Conversation.

Cr. 4. A course to course to build on French language skills; includes the finer points of grammar as well as the practice of French from the colloquial to the scholarly. Prerequisite: French 112 or 114.

120. Introduction to French Literature.

Cr. 4. Readings of representative works with supplementary lectures and extracts to give a broad overview of French literature from the Middle Ages to the present.

130. French Civilization.

Cr. 4. Civilization of France from earliest times to the present. Prerequisite: French 111 or 120.

Note: All literature seminars listed below may be repeated provided there is no duplication of material. Prerequisites for the seminars are French 111 and 120 or consent of the Chair of the Department.

160 (260). Seminar in French Renaissance Literature.

Cr. 3-4. (Graduate Cr. 3). Study of individual genres, authors, movements or aspects of French literature of the Renaissance.

161 (261). Seminar in French Classical Literature.

Cr. 3-4 (Graduate Cr. 3). Study of selected topics in the literature of the seventeenth and early eighteenth centuries.

162 (262). Seminar in French Literature of the Enlightenment.

Cr. 3-4. (Graduate Cr. 3). Selected areas of study in the writings of pre-revolutionary France.

163 (263). Seminar in French Literature of the Nineteenth Century.

Cr. 3-4. (Graduate Cr. 3). Study of such topics as Romanticism, Realism and Naturalism in the French novel, theatre or poetry.

164 (264). Seminar in Contemporary French Literature.

Cr. 3-4. (Graduate Cr. 3). Study of literary trend-setters in the novel, drama or poetry of France before and after World War II.

181. Cooperative Education in French I.

Cr. 0.5-3. Work experience with a cooperating employer. Written report required. Prerequisites: 12 credits beyond French 30 and approval of the Chair of the Department. S/U grade.

182-183. Cooperative Education in French II-III.

Cr. 0.5-3. Continuation of French 181. Prerequisites: French 181 and approval of the Chair of the Department. S/U grade. May be repeated beyond 183 for additional credit.

190. Supervised Reading and Research in French.

Cr. 1-4. Intended for students capable of doing independent study in French language, civilization and literature. Prerequisite: consent of the Chair of the Department.

191. The Teaching of Foreign Languages.

Cr. 2. (See Education 191.) A study of the methods of teaching foreign languages in secondary schools. May not be counted toward a major or minor in the Department of Foreign Languages and Literatures. Prerequisite: admission to Supervised Teaching. Given upon sufficient demand.

197. Honors Work in French.

Cr. 3. See Honors Work, page 38.

198. Honors Candidacy in French.

Cr. 3. See Honors Work, page 38.

German

Major. A minimum of 20 credit hours in German beyond German 30 constitutes a major. Majors are required to take courses in language, literature, and civilization (111, 120, 130).

Minor. A minimum of 10 credit hours beyond German 30 constitutes a minor.

Teaching Programs. Students who plan to teach German in secondary schools with a major or minor in German should consult the Chair of the Department and the Education Department for specific requirements.

The Walther M. Miller Memorial Prize. See page 19 for details.

10. First Semester German.

Cr. 4. A course designed to give the student the essentials of German. Credit may not be counted for graduation by a student who has completed a second year German course in high school.

20. Second Semester German.

Cr. 4. A continuation of German 10. Prerequisite: German 10 or equivalent.

30. Intermediate German.

Cr. 4. Reading, writing and discussion in German on the intermediate level; review of German grammar. Upon demand a special reading section will be offered. Prerequisite: German 20 or equivalent.

50. Topics in German Literature and the Fine Arts.

Cr. 3. Study of selected works of German literature in English translation and of their correlates in the visual arts and/or music. No knowledge of German required. May not be counted toward a major or minor in German.

65. History of the German Film.

Cr. 3. A survey of the German film from the 1920's to the present. No knowledge of German required. May not be counted toward a major or minor in German. This course may be used to fulfill the Fine Arts/Fine Arts-Literature requirement.

Note: German 30 is a prerequisite for all of the following courses; prerequisites

may be waived by the Chair of the Department.

111. German Composition and Conversation I.

Cr. 4. Practice in speaking (general conversation beyond survival needs), understanding (standard German spoken at a normal rate), reading (non-specialized texts), and writing (paragraphs). May be repeated for credit at Reutlingen Center.

112. German Composition and Conversation II.

Cr. 4. A continuation of German 111, with work of increased difficulty. Prerequisite: German 111 or 120.

113. Advanced German.

Cr. 2. Practice in speaking on all time levels, basic understanding of native speakers, reading of texts on unfamiliar subjects, and writing of page-length compositions. Prerequisite: German 112.

114. Contemporary German Language in the Mass Media.

Cr. 4. The contemporary German language as used in radio broadcasts, newspapers, magazines and other sources from German-speaking countries. Prerequisite: German 111 or 112.

115. History of the German Language.

Cr. 2-4. A survey of the development and phonetics of the German language. Prerequisite: German 110, 112 or 120.

116. Professional German.

Cr. 2. A study of the German language primarily for participants in the Program in International Economics and Cultural Affairs. The course is adjusted to the career needs of the individual class. Prerequisite: German 110 or 112.

117. Advanced German Translation.

Cr. 2. Exercises in the translation of practical and literary texts from and into German. Prerequisite: German 112.

120. Introduction to German Literature.

Cr. 4. A study of basic forms of German literature. Reading and discussion of at least one tragedy, one comedy, one *Novelle*, and selections from various types of poetry.

125. The German Lyric.

Cr. 2. A survey of German lyric verse from its beginning to modern times. Class reading, lectures, independent reading and audio recordings. Prerequisite: German 110, 112 or 120.

126. The German Novelle and Short Story.

Cr. 2. Systematic and historical study of the *Novelle* and the short story. Class reading and discussion of representative *Novellen* and short stories; lectures, independent reading and class reports. Prerequisite: German 110, 112 or 120.

128. The German Drama.

Cr. 2. Development of the German drama from its beginning to modern times. Reading of representative plays of each period, lectures and discussion. Prerequisite: German 110, 112 or 120.

130 (230). German Civilization.

Cr. 3-4. (Graduate Cr. 3). An historical survey of the German cultural heritage in the fields of history, philosophy, religion, sociology and the fine arts. Prerequisite: German 110, 112 or 120.

155. Goethe and Schiller.

Cr. 4. Class reading and discussion, lectures, independent reading and class reports. Prerequisite: German 110, 112 or 120.

160 (260). Studies in the History of German Literature.

Cr. 2-4. (Graduate Cr. 3). Selected periods from the history of German literature. Course may be repeated provided there is no duplication of material. Prerequisite: German 110, 112 or 120.

181. Cooperative Education in German I.

Cr. 0.5-3. Work experience with a cooperating employer. Written report required. Prerequisites: 12 credits beyond German 30 and approval of the Chair of the Department. S/U grade.

182-183. Cooperative Education in German II-III.

Cr. 0.5-3. Continuation of German 181. Prerequisites: German 181 and approval of the Chair of the Department. S/U grade. May be repeated beyond 183 for additional credit.

190. Supervised Reading and Research in German.

Cr. 1-4. Intended for students capable of doing independent study in German language, civilization and literature. Research paper required. Prerequisite: consent of the Chair of the Department.

191. The Teaching of Foreign Languages.

Cr. 2. (See French 191 and Education 191.) Prerequisite: admission to Supervised Teaching.

197. Honors Work in German.

Cr. 3. See Honors Work, page 38.

198. Honors Candidacy in German.

Cr. 3. See Honors Work, page 38.

The Classics

Major. A minimum of 16 credit hours in Greek and 12 credit hours in Latin beyond Latin 30 constitute a major in classics.

Greek

Major. A minimum of 24 credit hours in Greek constitutes a major.

Minor. A minimum of 16 credit hours in Greek constitutes a minor.

The Reverend and Mrs. Arthur L. Reinke Memorial Scholarship. See page 192 for details.

The Ruth H. Gunther Scholarship. See page 192 for details.

Delta Upsilon Chapter of Eta Sigma Phi Scholarship. See page 192 for details.

The Vinay K. Das Scholarship. See page 192 for details.

10. First Semester Greek.

Cr. 4. A course designed to give the student the essentials of New Testament Greek.

20. Second Semester Greek.

Cr. 4. A continuation of Greek 10, followed by reading the Gospel of Mark. Prerequisite: Greek 10 or equivalent.

30. Intermediate Greek.

Cr. 4. Selected readings from the New Testament, with a study of its philology and syntax, including an introduction to manuscript traditions and textual criticism. Prerequisite: Greek 20 or equivalent.

50. Topics in Greek Literature and Fine Arts.

Cr. 3. Study of selected works of Greek literature in English translation and of their correlates in the visual arts and/or music. No knowledge of Greek required. May not be counted toward a major or minor in Greek.

51. Classical Mythology.

Cr. 3. Survey of Greek and Roman myths and their influence on modern literature and art. No knowledge of Greek or Latin required. May not be counted toward a major or minor in Greek or Latin.

Note: Greek 30 is a prerequisite for all of the following courses; prerequisites may be waived by the Chair of the Department.

110. Greek Orators.

Cr. 2-4. Selections from the Attic orators; study of oratory in Athenian democracy.

112. Greek Historiography: Selected Readings from Greek Historians.

Cr. 2-4. A study of contrasting philosophies of history.

113. Plato.

Cr. 2-4. Reading of representative dialogues. Study of Plato as philosopher and of the personality of Socrates.

114. Homer.

Cr. 2-4. Selections from the *Iliad* and *Odyssey*. Study of the literary qualities of the early epic and of life in the Heroic Age.

115. Greek Drama.

Cr. 2-4. Selected plays of Aeschylus, Sophocles, Euripides and Aristophanes, with supplementary lectures on the Greek theatre.

116. Hellenistic Greek.

Cr. 2-4. Readings from the Greek Septuagint and subsequent Hellenistic literature.

125. Greek Composition.

Cr. 1-2. Greek writing of moderate difficulty, including translation into Greek of passages of connected English prose; review of grammar and syntax.

181. Cooperative Education in Greek I.

Cr. 0.5 - 3. Work experience with a cooperative employer. Written report required. Prerequisites: 12 credits beyond Greek 30 and approval of the Chair of the Department. S/U grade.

182-183. Cooperative Education in Greek II-III.

Cr. 0.5 -3. Continuation of Greek 181. Prerequisites: Greek 181 and approval of the Chair of the Department. S/U grade. May be repeated beyond 183 for additional credit.

190. Supervised Reading and Research in Greek.

Cr. 1-4. Intended for students capable of doing independent study in Greek language and literature. Scholarly paper required. Prerequisite: consent of the Chair of the Department.

197. Honors Work in Greek.

Cr. 3. See Honors Work, page 38.

198. Honors Candidacy in Greek.

Cr. 3. See Honors Work, page 38.

Hebrew

Minor. A minimum of 16 credit hours in Hebrew constitutes a minor.

10. First Semester Hebrew.

Cr. 4. Elements of Hebrew grammar stressing oral and reading ability. Credit may not be counted for graduation by a student who has taken two years of high school Hebrew.

20. Second Semester Hebrew.

Cr. 4. A continuation of Hebrew 10, with reading of simpler prose sections of the Old Testament. Prerequisite: Hebrew 10 or equivalent.

30. Intermediate Hebrew.

Cr. 4. Selected reading of Old Testament prose and poetry, with attention to increased vocabulary and linguistic structure. Prerequisite: Hebrew 20 or equivalent.

120. Selected Readings in Hebraic Literature.

Cr. 2-4. Readings for advanced students from the Old Testament and rabbinic literature. Prerequisite: Hebrew 30 or consent of the Chair of the Department.

190. Supervised Reading and Research in Hebrew.

Cr. 1-4. Intended for students capable of doing independent study in Hebrew language and literature. Research paper required. Prerequisite: consent of the Chair of the Department.

Japanese*

10. Beginning Japanese I.

Cr. 4. An introduction to the basic grammar of Japanese.

*The University is introducing courses in Japanese beginning with the 1986-1987 academic year, and intends to offer courses in Japanese according to student demand. Courses in Japanese may be used to complete an individualized major in East Asian Studies, a second major in East Asian Studies, and an East Asian Studies minor.

20. Beginning Japanese II.

Cr. 4. A continuation of Japanese 10.
Prerequisite: Japanese 10 or equivalent.

30. Intermediate Japanese I.

Cr. 4. Reading, writing, and discussion in Japanese on the intermediate level, with a review of Japanese grammar. Prerequisite: Japanese 20 or equivalent.

40. Intermediate Japanese II.

Cr. 4. A continuation of Japanese 30.
Prerequisite: Japanese 30 or equivalent.

50. Topics in Japanese Literature and the Arts.

Cr. 3. Study of selected works of Japanese literature in English translation and of their correlates in the visual arts and/or music. No knowledge of Japanese required.

51. Introduction to Japanese Literature.

Cr. 3. Readings of representative works of Japanese literature in English from the medieval period to the present. No knowledge of Japanese required.

190. Supervised Reading and Research in Japanese.

Cr. 1-4. Intended for students capable of doing independent study in Japanese language, civilization, and literature. Research paper required. Prerequisite: consent of the Chair of the Department.

Latin

Major. A minimum of 20 credit hours beyond Latin 30 constitutes a major.

Minor. A minimum of 10 credit hours beyond Latin 30 constitutes a minor.

Teaching Programs. Students who plan to teach Latin in secondary schools with a major or minor in Latin should consult the Chair of the Department and the Education Department for specific requirements.

Scholarships. See under Greek for list of scholarships in Classical Languages.

10. First Semester Latin.

Cr. 4. A course designed to give the student the essentials of Latin. Credit may not be counted for graduation by a student who has completed a second year Latin course in high school.

20. Second Semester Latin.

Cr. 4. A continuation of Latin 10, followed by easy selections from Latin prose. Prerequisite: Latin 10 or equivalent.

30. Intermediate Latin.

Cr. 4. Introduction to Latin epic poetry; readings from the *Aeneid* of Virgil and the *Metamorphoses* of Ovid. Prerequisite: Latin 20 or equivalent.

50. Topics in Latin Literature and the Fine Arts.

Cr. 3. Study of selected works of Latin literature in English translation and of their correlates in

the visual arts and/or music. No knowledge of Latin required. May not be counted toward a major or minor in Latin.

51. Classical Derivatives.

Cr. 3. Analysis of English vocabulary, including scientific terms, derived from Latin and Greek. No knowledge of Latin or Greek required. May not be counted toward a major or minor in Latin or Greek.

Note: Latin 30 is a prerequisite for all of the following courses; prerequisites may be waived by the Chair of the Department.

110. Roman Oratory.

Cr. 2-4. Selected political and judicial speeches of Cicero; study of Roman oratory during the Republic and Empire.

115. Roman Philosophy.

Cr. 2-4. Study of representative essays of Cicero and of selections from the *De Rerum Natura* of Lucretius; study of the various schools of Greco-Roman philosophy.

116. Latin Lyric and Elegaic Poetry.

Cr. 2-4. Roman society in the last years of the Republic and in the Augustan Age as reflected in Catullus, Horace, Tibullus and Propertius.

117. Roman Historians.

Cr. 2-4. Selections from the works of Caesar, Sallust, Livy and Tacitus; study of Roman historiography.

118. Roman Comedy.

Cr. 2-4. History of Roman drama. Readings and translation of representative plays of Plautus and Terrence.

119. Roman Satire and Epistigraphy.

Cr. 2-4. Selections from the poetry of Juvenal and Martial and from the Letters of Cicero and Pliny. Life and manners of the late Republic and early Empire.

120 (220). Survey of Latin Literature I.

Cr. 2-4. (Graduate Cr. 3). Latin poetry and prose of the Roman Republic.

121 (221). Survey of Latin Literature II.

Cr. 2-4. (Graduate Cr. 3). Latin poetry and prose of the Roman Empire.

125. Latin Composition.

Cr. 2-4. Latin writing of moderate difficulty, including translation into Latin of passages of connected English prose; review of grammar and syntax.

140. Patristic and Medieval Latin.

Cr. 2-4. Readings in the Vulgate and the Fathers and in religious prose and poetry of the Medieval period.

181. Cooperative Education in Latin I.

Cr. 0.5 - 3. Work experience with a cooperating employer. Written report required. Prerequisites: 12 credits beyond Latin 30 and approval of the Chair of the Department. S/U grade.

182-183. Cooperative Education in Latin II-III.

Cr. 0.5 -3. Continuation of Latin 181. Prerequisites: Latin 181 and approval of the Chair of the Department. S/U grade. May be repeated beyond 183 for additional credit.

190. Supervised Reading and Research in Latin.

Cr. 1-4. Intended for students capable of doing independent study in Latin language and literature. Scholarly paper required. Prerequisite: consent of the Chair of the Department.

191. The Teaching of Foreign Languages.

Cr. 2. (See French 191 and Education 191.) Prerequisite: admission to Supervised Teaching.

197. Honors Work in Latin.

Cr. 3. See Honors Work, page 38.

198. Honors Candidacy in Latin.

Cr. 3. See Honors Work, page 38.

Spanish

Major. A minimum of 20 credit hours beyond Spanish 30 constitutes a major. Courses must include Spanish 111, 120, one course in civilization (130 or 131) and one literature course numbered above 120 (160-166).

Minor. A minimum of 10 credit hours above Spanish 30 constitutes a minor.

Teaching Programs. Students who plan to teach Spanish in secondary schools with a major or minor in Spanish should consult the Chair of the Department and the Education Department for specific requirements.

10. First Semester Spanish.

Cr. 4. An introduction to basic grammar, simple conversation and composition, and elementary comprehension. Credit may not be counted for graduation by a student who has completed a second year Spanish course in high school.

20. Second Semester Spanish.

Cr. 4. A continuation of Spanish 10 which completes the study of basic grammar. Students read simple to intermediate works, improve writing skills and converse in Spanish. Prerequisite: Spanish 10 or equivalent.

30. Intermediate Spanish.

Cr. 4. A course in which the student perfects grammar skills and deepens his understanding of Hispanic culture. The student is expected to read uncomplicated works of literature, write compositions and be able to sustain a general conversation. Prerequisite: Spanish 20 or equivalent.

50. Topics in Spanish Literature and the Fine Arts.

Cr. 3. Study of selected works of Spanish literature in English translation and of their correlates in the visual arts and/or music. No knowledge of Spanish required. May not be counted toward a major or minor in Spanish. The topic, Spanish America in Literature and the Arts, may be used to fulfill the Fine Arts//Fine Arts-Literature and the Non-Western Third World components of the general education requirements.

Note: Spanish 30 is a prerequisite for all of the following courses. Prerequisites may be waived by the Chair of the Department.

111. Spanish Composition and Conversation.

Cr. 4. A perfection of speaking and writing skills in the Spanish language.

114. Contemporary Hispanic Society through Communications.

Cr. 4. Utilization of newspapers, magazines, radio, television and essay as a basis for conversation, composition and grammar study. Prerequisite: Spanish 111.

116. Professional Spanish: International.

Cr. 3. An intensive study of the Spanish language and customs for students preparing for careers in international business and international relations. Prerequisite: Spanish 111.

117. Professional Spanish: Service.

Cr. 3. An intensive study of the Spanish language and customs for students preparing for service professions such as law, health and social work. Prerequisite: Spanish 111.

118. The Spanish Language.

Cr. 3. An introduction to the development and usage of the Spanish language through the study of linguistics, particularly phonetics and philology. Prerequisite: Spanish 111.

120. Selected Readings in Hispanic Literature.

Cr. 4. The reading and discussion of works of Hispanic literature representative of various literary genres, with emphasis on the techniques of literary criticism and the problems of analyzing literature in a second language. Prerequisite: Spanish 111.

130. Spanish Civilization.

Cr. 4. A course intended to further the student's knowledge of the varied elements of Spanish history and culture. Lectures and individual oral participation in Spanish. Prerequisite: Spanish 111.

131. Spanish-American Civilization.

Cr. 4. A course intended to further the student's knowledge of the varied elements of Spanish-American history and culture. Lectures and individual participation in Spanish. Prerequisite: Spanish 111.

Note: All literature courses listed below have as their prerequisite Spanish 120 or the consent of the Chair of the Department. All literature courses are taught entirely in Spanish.

160. Seminar in Hispanic Literature.

Cr. 3. The examination of selected themes, movements or authors in Spanish and Spanish-American literature. This course may be repeated provided there is no duplication of material.

161. Golden Age Spanish Literature.

Cr. 3. The study of literary works of 16th and 17th Century Spain.

162. Nineteenth Century Spanish Literature.

Cr. 3. The study of Romanticism and Realism in 19th Century Spanish literature.

163. Contemporary Spanish Literature to the Civil War.

Cr. 3. The study of the authors of the generation of 1898 and after.

164. Contemporary Spanish Literature after the Civil War.

Cr. 3. The study of the literature of the Franco and post-Franco eras.

165. Spanish-American Literature I.

Cr. 3. A study of the prose of Spanish America with special emphasis on the 20th Century.

166. Spanish-American Literature II.

Cr. 3. A study of the poetry and short stories of Spanish America.

181. Cooperative Education in Spanish I.

Cr. 0.5-3. Work experience with a cooperating employer. Written report required. Prerequisites: 12 credits beyond Spanish 30 and approval of the Chair of the Department. S/U grade.

182-183. Cooperative Education in Spanish II-III.

Cr. 0.5-3. Continuation of Spanish 181.

Prerequisites: Spanish 181 and approval of the Chair of the Department. S/U grade. May be repeated beyond 183 for additional credit.

190. Supervised Reading and Research in Spanish.

Cr. 1-4. Intended for students capable of doing independent study in Hispanic language, civilization or literature. Research paper required. Prerequisite: consent of the Chair of the Department.

191. The Teaching of Foreign Languages.

Cr. 2. (See French 191 and Education 191.)

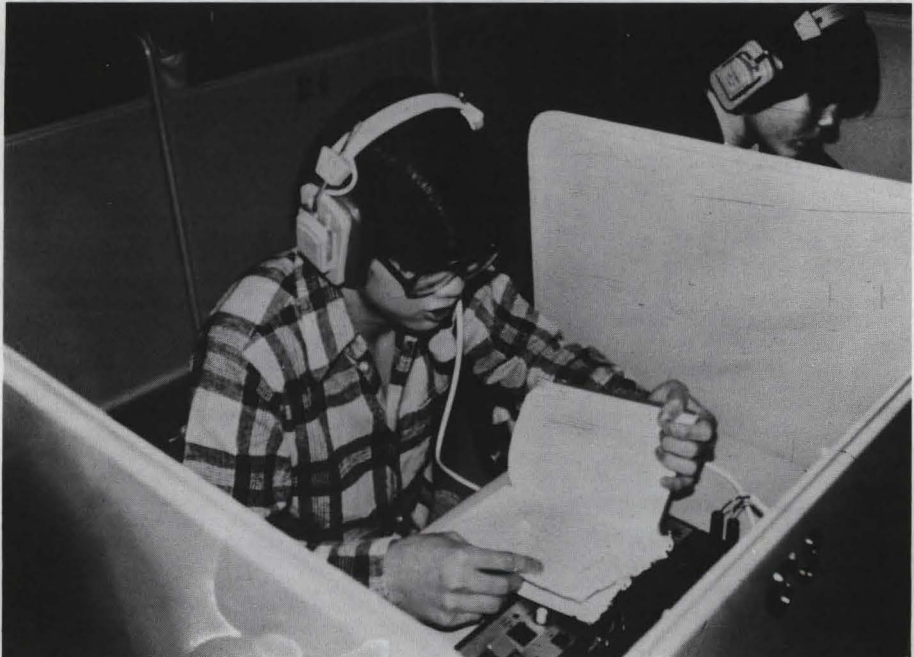
Prerequisite: admission to Supervised Teaching.

197. Honors Work in Spanish.

Cr. 3. See Honors Work, page 38.

198. Honors Candidacy in Spanish.

Cr. 3. See Honors Work, page 38.



Geography

**Professors Kallay, Rechlin;
Associate Professors Hansis (Chair),
Janke; Instructor Dunning.**

Geography is a diverse subject which provides students with a strong, practical liberal arts education and offers a wide variety of employment opportunities. The diversity of the discipline stems from its fundamental concern with how humans as individuals and in groups interact with the physical environment.

The Department's two major objectives are:

1. To provide students with knowledge of the physical environment and human use of that environment;
2. To equip students with marketable skills for employment in positions related to the discipline or to prepare them for graduate programs leading toward advanced degrees.

While graduate training usually enlarges a student's opportunities, employment may be found upon graduation with a baccalaureate degree and a geography major. The following are some of the fields of employment for geography majors: cartography, demography, climatology, industrial location planning, land use planning, soil conservation, transportation planning, teaching of geography.

Student interest in geography outside the classroom is encouraged through the Geographical Society, which organizes social activities as well as cultural programs. In addition, those who distinguish themselves by high scholarship may be elected to membership in Gamma Theta Upsilon, the international geographic honor society. The Alpha Xi Chapter of Gamma Theta Upsilon was installed at Valparaiso University in 1950.

Valparaiso University, with over 125,000 maps, is the only map repository of the Army Map Service and the United States Geological Survey in Northwest Indiana. Annually thousands of national, regional and topographic maps of all continents are received.

Major. A minimum of 30 credit hours in geography constitutes a major. Courses must include 1, 2, 3, 4, 62, at least one course from the 100-108 series and one course numbered 150 or above.

Students who are contemplating professional or graduate work in geography should take at least 35 credit hours in the Department. For this professional major, students are required to take 1, 2, 3, 4, 62, 72 and at least four of the following systematic or technical courses: 150, 152, 154, 156, 160, 161, 166, 178 and 195.

The Department emphasizes five professional career phases of the field: environmental management/land use analysis; meteorology/weather forecasting; urban and regional planning; cartography/map making, and tourism. In addition to the specified courses to be taken in the Department of Geography, certain cognate courses, which most closely correlate with each program of geographic concentration, are recommended.

Minor. A minimum of 17 credit hours in geography constitutes a minor. Geography 1, 2, 3 and 4 must be included, plus one more geography course.

Degree. Completion of the degree requirements of the College of Arts and Sciences with a major in Geography leads to the degree, Bachelor of Arts.

The Valparaiso University-Indiana University Northwest Geography and Geology Association (VIGGA) Major in Geology. The purpose of this association is to provide educational opportunities on the undergraduate level in the geological and geographical sciences to the students enrolled at Valparaiso University and Indiana University Northwest, Gary. Since the school year of 1970-1971, full-time undergraduate students in these academic disciplines have been permitted to enroll in Association courses under the following conditions:

1. Students may take a maximum of two courses per semester at the other participating institution.
2. These courses are treated as part of the student's normal load at the home institution and tuition and fees are levied accordingly.
3. The total number of credit hours to be taken is determined by the student's home institution.
4. Students who wish to take courses at the host institution should obtain the recommendation of the Chair of the Geography Department (V.U.).
5. Grades earned shall be recorded at the student's home institution.
6. A C or 2.00 average must be achieved on VIGGA courses to qualify the student to register

for courses at the host institution in the following semester.

Association students at Valparaiso University are expected to complete satisfactorily the following curriculum from course offerings at Valparaiso University and Association offerings at Indiana University Northwest in order to complete the major in geology. Degrees are awarded by the home institution.

- Geography 3. Cr. 4. (VU)
- Geography 4. Cr. 4. (VU)
- G-104 Evolution of the Earth. Cr. 3. (IUN)
- G-221 Introductory Mineralogy. Cr. 4. (IUN)
- G-222 Introductory Petrology. Cr. 3. (IUN)
- G-323 Structural Geology. Cr. 3. (IUN)
- G-334 Principles of Sedimentation and Stratigraphy. Cr. 3. (IUN)
- G-406 Introduction to Geochemistry. Cr. 3. (IUN)
- G-411 Principles of Invertebrate Paleontology. Cr. 3. (IUN)
- G-420 Regional Geology Field Trip. Cr. 1-3. (IUN)
- G-490 Undergraduate Seminar. Cr. 1-2. (IUN)

Additional Indiana University course offerings open to Valparaiso University students majoring in geology are G-350, G-410, and G-413. See the IUN catalog.

Completion of the degree requirements of the College of Arts and Sciences with a major in geology leads to the Bachelor of Arts degree or the Bachelor of Science degree.

Approval of Schedules. All students taking a major or minor in geography or the VIGGA major in geology, and all students planning to teach geography must have their schedules approved by the Chair of the Department at the beginning of each semester.

For Natural Science Credit:

- 3. Physical Geography I—Meteorology.**
2+4, Cr. 4. An introductory course designed to give the student a broad view of the principles of earth and atmospheric science, emphasizing meteorology. This course may be used to fulfill four credit hours of the Natural Science component of the general education requirements.
- 4. Physical Geography II—Geomorphology.**
2+4, Cr. 4. An analysis of natural landscapes emphasizing the interrelationships among landscape components: climate, vegetation, soils, hydrology and geomorphology. Field trip. This course may be used to fulfill four credit hours of the Natural Science component of the general education requirements.
- 5. Surface Geology.**
2+4, Cr. 4. A treatment of the evolution of landforms and their relationship to the structure and character of the rocks. Field trip. This course may be used to fulfill four credit hours of

the Natural Science component of the general education requirements.

For Social Science Credit:

- 1. Geography of the Industrialized World.**
Cr. 3. A regional analysis of the industrialized lands of the world, particularly the United States, Canada, Europe, the Soviet Union, Japan, Australia and New Zealand. The emphasis is on analysis of how human institutions and behavior, interacting with the physical environment, shape the organization of space. This course may be used to fulfill a part of the Social Analysis component of the general education requirement.
- 2. Geography of the Non-Industrialized World.**
Cr. 3. A regional survey of the so-called "Third World." The emphasis is on cultivation of a cosmopolitan sensitivity to and respect for cultures other than our own. This course may be used to fulfill a part of the Social Analysis component and the Non-Western or Third World component of the general education requirement.
- 60. Conservation of Natural Resources.**
Cr. 3. A study of the problems of American resources, especially energy; the institutions and attitudes which lead to these problems, and solutions for correcting them.
- 62. Economic Geography.**
Cr. 3. An analysis of the location of economic activities as parts of a system. Prerequisite: sophomore standing or above. This course may be used to fulfill a part of the Social Analysis component of the general education requirements.
- 70. Current Themes in Geography.**
Cr. 2-3. This course is designed to examine current geographic topics. A different theme is selected each time the course is offered. Such topics as settlement patterns, ethnic communities, poverty, landscape in literature, diffusion and perception studies, as well as problems associated with the physical environment may be considered. A student may repeat the course for credit as each new theme is investigated. The three-credit course extends throughout the semester; the two-credit course for seven weeks. Prerequisite: sophomore standing or above.
- 72. Cartography.**
0+6, Cr. 3. An introduction to cartographic techniques and the compilation and construction of maps. Prerequisite: sophomore standing or above.
- 74. North American Indian.**
Cr. 3. Regional treatment of the past and current conditions of North American Indian land use and settlement from the Columbian to the Reservation periods. Special attention is given to the regional analysis of native cultural areas and the impact of federal policy on contemporary social issues.

Note: In each of the courses 100-108 below, a geographic interpretation of the

physical, social, political, industrial and commercial processes and patterns of a particular region is given. Several regional courses may be offered each semester. Prerequisite for each of these is junior standing or the consent of the Chair of the Department.

100. Regional Geography of the United States and Canada.

Cr. 3.

101. Regional Geography of Latin America.

Cr. 3. May be used to fulfill the Non-Western or Third World component of the general education requirements.

102. Regional Geography of Europe.

Cr. 3. Recommended for students planning to participate in the Cambridge, Paris or Reutlingen Overseas Study Program.

103. Regional Geography of Africa.

Cr. 3. May be used to fulfill the Non-Western or Third World component of the general education requirements.

104. Regional Geography of Asia.

Cr. 3. May be used to fulfill the Non-Western or Third World component of the general education requirements.

105. Regional Geography of the Soviet Union.

Cr. 3.

106. Regional Geography of the Near East.

Cr. 3. May be used to fulfill the Non-Western or Third World component of the general education requirements.

107. Regional Geography of Australia-Oceania.

Cr. 3.

108. Field Study in European Geography.

Cr. 3. Overseas Study Program only.

150. Urban Geography.

Cr. 3. A course treating urban settlements as distinct geographic units. Topics covered include the history of urban settlement, economic classification of cities and patterns of urban land use. Field trip. Prerequisite: junior or senior standing.

152. Urban and Regional Planning.

Cr. 3. A course treating the nature, purposes and objectives of modern community planning for the promotion of social and economic well-being. Field trip. Prerequisite: junior or senior standing.

154. Communicating with Maps.

Cr. 3. The construction and analysis of maps as a form of communication are undertaken. Prerequisite: Geography 72 or its equivalent.

156. Air Photo Interpretation and Remote Sensing.

2+2, Cr. 3. An introduction to aerial photographs and data from remote sensors, including their use for land use planning. Prerequisite: Geography 4 or 5 or consent of the instructor. May be of interest to students in biology, political science and civil engineering.

160. Statistical Analysis in Geography.

Cr. 3. A course designed to teach the techniques of data collection and quantitative analysis. Prerequisite: junior or senior standing.

161. Research Design.

Cr. 3. A course in the methods of research. Each time the course is offered, a different topic is selected for examination. Normally topics deal with current problems in Northwestern Indiana. The results of the class research frequently contribute to the solution of the problem studied. Prerequisite: junior or senior major or permission of the instructor.

164. The Profession of Geography.

Cr. 2. The nature of geography as a professional field of endeavor is treated in the context of the ethical responsibilities of the practicing geographer. Opportunities to explore various aspects of geographic professionalism are offered. Open to junior and senior majors and minors.

166 (266). History of Geography.

Cr. 3. Readings, papers and discussion on the development of geographic thought especially in the nineteenth and twentieth centuries; on basic concepts of the field; on the place of geography within thought and value systems, and on the contributions of major geographers, past and present, to the discipline and to the intellectual world at large. Prerequisite: junior or senior standing.

170 (270). Political Geography.

Cr. 2. An investigation of the relations among political activities and organizations and the geographic conditions within which they develop. Political power is discussed in terms of spatial, human, cultural and ethnic geography. May be of interest to political science majors.

171 (271). Selected Topics in Physical Geography.

Cr. 2-3. Advanced studies in physical geography. Such topics as weather forecasting, applied climatology, landform analysis and the development of environmental impact statements are considered. May be repeated when the topic is different. Prerequisites: Geography 3 or 4 or the equivalent and consent of the instructor.

174 (274). Historical Geography of the United States.

Cr. 3. A regional treatment of the exploration, colonization, territorial expansion, migration, transportation, settlement and economic development of our country in relation to the physical environment. The course is primarily designed for students majoring in one of the social sciences. Prerequisite: junior or senior standing. May be of particular interest to history majors.

176 (276). The Geography of World Affairs.

Cr. 2. A workshop course to develop the technique of interpreting current world events in the geographic framework in which the events occur. Prerequisite: junior or senior standing.

178 (278). Field Study.

0+4, Cr. 2-3. A course designed to develop methods and techniques of geographic field work. May include a week of intensive work at a

field site at a time when the University is not in session, possibly in late summer. Additional fees may be charged to cover expenses.
Prerequisite: consent of the Department Chair.

195. Independent Study.

Cr. 2-3. Individual research or readings on a topic in geography agreed upon by a student and a faculty member of his choice from the Geography Department. Prerequisites: junior or senior standing and consent of the Chair of the Department.

196. Internship in Geography.

Cr. 2-6. Students gain experience by work in public or private agencies, such as planning firms, national parks and map companies.
Prerequisites: junior or senior geography major and application for an internship in writing to the Chair of the Department.

197. Honors Work in Geography

Cr. 3. See Honors Work, page 38.

198. Honors Candidacy in Geography.

Cr. 3. See Honors Work, page 38.



History

Professors Boyd, Engelder, Krodel, Startt; Associate Professors Berg (Acting Chair), Kohlhoff, Schoppa.

One of the central disciplines of the traditional liberal arts, history is concerned with understanding the development of societies and cultures which produced the world as we know it. The historian is present-minded, convinced that illumination of the past is of fundamental importance in today's decision-making and for tomorrow's dreams. History provides a solid major for those with career goals in law, teaching, journalism, government and the ministry. Combining a history major with a Liberal Arts Business Minor has proved to be a popular alternative for those who have strong interests in history and who plan to pursue a business career. Since the history student integrates materials from the social and behavioral sciences, literature, philosophy, religion and the arts, history is also a field for students who view the undergraduate years as time to explore a variety of subjects.

Major. A minimum of 30 credit hours in history constitutes a major. Courses must include History 5, 10, 170 and 175. Twelve hours of the major must be taken in courses numbered 100 or above in addition to those listed; for these twelve hours the student must elect at least one course in each of the following fields:

History of the Americas,
European history,
Non-Western history.

Students who plan on graduate work in history are strongly urged to acquire reading proficiency in at least one modern foreign language.

Minor. A minimum of at least 18 credit hours in history constitutes a minor. Courses must include History 5 and 10. Six of the remaining twelve hours must be in courses numbered 100 or above, divided into two areas (see fields under Major).

Degree. Completion of the degree requirements of the College of Arts and Sciences with a major in History leads to the Bachelor of Arts degree.

Pre-Law Students. Pre-law students who are taking a major in history should consult their adviser about appropriate course selections and about the selection of a second major or a minor.

Approval of Schedules. Students taking a major or minor in history must have their schedules approved by the Chair of the Department each semester. In addition, each class of majors is assigned to a member of the Department for advising.

5. History of Western Thought and Society.*

Cr. 3. A study of the thought and social development that has characterized Western society from ancient to modern times. Special attention is given to identifying the basic traditions of Western culture and to examining the process of historical change. Required of all freshmen as part of the general education requirements.

Note: The survey courses, 10 through 41, may be used to fulfill the Philosophical and Historical Studies component of the general education requirements. Courses 30, 31, 40 and 41 may be used to fulfill the Non-Western or Third World component of the general education requirements.

10. Introduction to the Contemporary World.*

Cr. 3. A survey of modern Western and Non-Western history. Particular emphasis is placed on the development of the various world civilizations in recent centuries and on the interaction that has occurred among them.

20. United States History to 1865.†

Cr. 3. A study of the various aspects of American civilization from the age of discovery to the end of the Civil War, with emphasis on the development of democratic ideas and institutions.

21. United States History since 1865.†

Cr. 3. A study of various aspects of American civilization from the Civil War to the present, with emphasis on the development of industrial and world power against a background of social and cultural tensions.

30. Origins of Latin American Civilization.

Cr. 3. A survey of the major periods of Latin American history to 1825, with emphasis on the

*Credit for History 5 and 10 may be earned through the College Level Examination Program subject examination in Western Civilization or through the Advanced Placement examination offered by the College Entrance Examination Board.

†Credit for History 20 and 21 may be earned through the College Level Examination Program subject examination in American History or through the Advanced Placement examination offered by the College Entrance Examination Board.

pre-Columbian Indian cultures, Africa's contribution and the Iberian heritage.

31. Contemporary Latin American Civilization.

Cr. 3. A survey of the republics from independence to the present, relating contemporary Latin American problems to underdevelopment and unrest in the current world scene.

40. Traditional East Asian Civilization.

Cr. 3. A survey of the traditional cultures of China, Japan, Vietnam and Korea before the impact of Western civilization.

41. Modern East Asian Civilization.

Cr. 3. A survey of the modern history of China, Japan, Vietnam and Korea, with emphasis on the meeting of East and West and the struggle for development and self-expression in our times.

Note: Courses 151 and 152 are available in Overseas Study Centers only.

151. Survey of English History and Culture.

Cr. 3. A survey of English life from Roman times to the present, emphasizing broad movements, themes and institutions. Cambridge Center.

152. Problems in Modern German History.

Cr. 3. An examination of modern German history emphasizing selected problems. Reutlingen Center.

Note: The courses listed below require at least sophomore standing or consent of the Chair of the Department.

EUROPEAN HISTORY

111 (211). Greek and Roman Civilization.

Cr. 3. A study of the Greek and Roman political, social and intellectual development from the Mycenaean period to the fourth century A.D.

112 (212). Europe in the Age of the Reformation.

Cr. 3. A study of the political, socio-economic and religious conditions in Europe under the impact of the Protestant Reformation.

113 (213). History of Modern England.

Cr. 3. A study of English history in the eighteenth, nineteenth and twentieth centuries. Stress is on understanding the political, cultural and industrial development of England as a great power and its position in the contemporary world.

114 (214). The British Imperial Experience.

Cr. 3. A study of the British empire, emphasizing its evolution in the nineteenth and twentieth centuries. Particular attention is given to an introduction of the Old Dominions (Canada, Australia, New Zealand and South Africa), to the British in India and to interpretations of imperialism.

115 (215). Contemporary Europe.

Cr. 3. A study of the European scene from the Great Depression, Nazi Germany and World War II to the present.

HISTORY OF THE AMERICAS

121 (221). The American Revolution, 1763-1789.

Cr. 3. A detailed study through readings and discussion of the unresolved conflicts between Great Britain and her American colonies; the political, military and social aspects of the revolution; and the post-war problems culminating in the adoption of the Constitution.

122 (222). Slavery, Abolitionism and Sectionalism, 1815-1860.

Cr. 3. A detailed study through readings and discussion of the institution of slavery, the growth of abolitionism and other reform movements, and the development of sectionalism leading to the outbreak of the Civil War.

123 (223). Civil War and Reconstruction.

Cr. 3. A study of the great watershed conflict in American history, with special emphasis on the problems of Black Americans.

124 (224). Depression and War: The United States, 1929-1945.

Cr. 3. This course examines the nature of the Great Depression and its effects on the relationship of government to citizens in the United States. It also traces the European and Far Eastern origins of the American involvement in World War II as well as the diplomatic and military conduct of that war.

125 (225). The Age of Anxiety: United States since 1945.

Cr. 3. An examination of the post-war American response to the prospect of living in an uncertain world.

126 (226). American Constitutional History.

Cr. 3. An examination of the growth of the American constitution from its colonial origins to the present. Emphasis is placed on such developments as the Constitution's formation, its testing in the Civil War and its adjustment to the problems of twentieth century society.

127 (227). History of American Political Parties.

Cr. 3. A study of the development of American political parties from their appearance in the eighteenth century to the present. Emphasis is placed on the evolution of political leadership, the creation of coalitions and political campaign behavior.

131 (231). History of Mexico.

Cr. 3. A study of the struggle for political, economic and cultural identity in America's southern neighbor.

NON-WESTERN HISTORY

141 (241). History of Modern China.

Cr. 3. A study of the decline of traditional civilization resulting from domestic crises and foreign pressures, and the search for a new orthodoxy in the Chinese revolution.

142 (242). History of Modern Japan.

Cr. 3. A study of Japan's rise to its position as a world power with emphasis on the consequent social dislocations in the twentieth century.

SPECIALIZED OFFERINGS

160 (260). Topics in History.

Cr. 3. An in-depth study of an historical topic, problem or issue. Topics vary according to student interest and instructor choice. Possible topics include American colonial history, the history of journalism, the Renaissance, the French revolution, traditional Chinese culture, and the history of women. This course may be repeated for credit if the topics are different. Although majors may take any number of Topics courses, no more than two may be included in the thirty-hour major.

170. Introduction to Historical Research.

Cr. 2. This course examines the discipline of history, the sources of historical knowledge and the problems and procedures of historical method. Prerequisite: at least 6 credit hours of history.

172 (272). Reading and Discussion Seminars.

Cr. 2-3. Full- or half-semester courses cover a variety of subject areas with subtitles and content dependent on student interest and instructor choice. In recent years these have included Slavery in the Americas, History of the American South, Revolutionary Russia, Vietnam War through Film and Literature, Pearl Harbor, American Immigration History and Cuban Revolution. This course may be repeated for credit if topics are different. Prerequisite: junior or senior standing or consent of the Chair of the Department.

175. Research Seminars.

Cr. 3. These are full-semester courses designed for majors, but also open to other students with junior or senior standing. They offer intensive research in both primary and secondary sources

and instruction in historical methodology. A major paper constitutes the largest part of the semester's work. This course may be repeated for credit if the topics are different. Prerequisites: junior or senior standing and the consent of the Chair of the Department.

180 (280). Supervised Study.

Cr. 2-3. An opportunity for students to read a number of significant works on a given topic in history, or to do research and write a major paper on a topic not covered in any scheduled offering of the Department. Open to students who have taken at least eighteen credit hours of history and who have obtained the prior consent of both the instructor and the Chair of the Department. If the student chooses the research option, he must have completed History 170 before undertaking this course. This course may be taken only once from a given instructor, only once per subject area and only once for a thirty-hour major.

191. The Teaching of Social Studies.

Cr. 2. (See Education 191.) A study of methods of teaching social studies in secondary schools. Prerequisite: admission to Supervised Teaching. This course may not be counted toward a major or minor in the Department.

196 (296). The Interpretation of History.

Cr. 2. An introduction to selected major historians and their approaches to problems of interpretation faced by students of history. Prerequisite: at least six credit hours of history.

197. Honors Work in History.

Cr. 3. See Honors Work, page 38.

198. Honors Candidacy in History.

Cr. 3. See Honors Work, page 38.



Home Economics

**Associate Professor Evans (Chair);
Assistant Professors Adgate,
Antommara; Instructor Lakin.**

The objective of the Department is to provide education and training for those who plan to work in the Home Economics area. The major in Home Economics may be applied in business, education and consultation, while working with individuals, families and organizations. Some representative careers are restaurant management, catering, hotel dining management, food sales, administrative or therapeutic dietetics, fashion design, fashion buying, clothing sales, residential or commercial interior design or work as an extension agent. Principles from the curriculum may be applied in any of the five areas of concentration as well as to the concerns and problems of daily life.

Courses offered by the Department are designed to develop students intellectually and to prepare them professionally. The programs in Dietetics, Fashion Merchandising and Interior Design offer recommended field experiences. To fulfill the requirements for the major, students must select and complete one of the area concentrations or programs listed below. Students should consult their advisers to determine additional requirements, if any, for professional certification.

The student who pursues a Home Economics major must have overall knowledge in the field of general home economics and a sound background in the sciences. Thus, each student completes basic home economics courses and supporting work in the natural and social sciences. Those majors following a merchandising program also complete courses in economics and business administration.

Departmental Organizations. The Valparaiso University Student Home Economics Association (SHEA) is affiliated with the national and state home economics organizations. Membership is open to all students. Professional programs are presented regularly.

SHEA members may also elect to join the Student Dietetic Association, The Couture Fashion Association or the

student chapter of the American Society of Interior Designers (ASID).

The Gamma Tau Chapter of the national home economics honor society, Kappa Omicron Phi, was installed at Valparaiso in 1975. Students with outstanding scholarship and a minimum of eight credit hours in home economics and membership in SHEA are invited to join.

Interdisciplinary Programs. Two interdisciplinary programs in Home Economics and Business Administration are available. These are Fashion Merchandising and Foods Merchandising. The Interior Design Program has an interdisciplinary approach with a minor in art.

Cooperative Education. Qualified students may participate in a paid, professional work experience which provides knowledge and experience in a specialized vocational area. Since Cooperative Education often involves full-time, off-campus employment, participating students will frequently extend the length of time required to complete their degree program. A maximum of six credits may be used to meet the minimum major requirements. Prerequisites include junior standing and approval of the Department Chair. (For further information, refer to Cooperative Education, College of Arts and Sciences, page 39.)

General Major. A minimum of 32 credit hours in Home Economics constitutes a major. Courses must include Home Economics 2, 5, 8, 140 and either 7 or 45. Other requirements are Biology 25, Chemistry 43 and 44, Communication 45, Psychology 51, and Sociology 1 and 26.

Minor. A minimum of 15 credit hours in Home Economics constitutes a minor. Within the minor, students may concentrate courses in Foods, Fashion, Nutrition, or Interior Design.

Degree. Completion of the degree requirements of the College of Arts and Sciences with a general major in Home Economics, or one of the special programs in Home Economics, leads to the degree Bachelor of Science in Home Economics. Completion of requirements for a special program is noted on the transcript in addition (e.g., Home Economics: Dietetics).

Approval of Schedules. All students taking a major or minor in Home Economics must have their schedules approved by a departmental adviser or the Department Chair at the beginning of each semester.

Fashion Merchandising

This program is for students in Home Economics who wish to have careers in some area of the fashion business.

Requirements. A minimum of 37 credit hours in Home Economics is required, which must include Home Economics 5, [7 or 45] and 140.

The other Home Economics courses for this program include 1, 2, 8, 20, 52, 102, 104, 133 and 135. Other Arts and Science courses required are Biology 25, Chemistry 43 and 44, Communication 45, Economics 71, English 57, Psychology 51, and Sociology 1 and 26.

The following courses from the College of Business Administration must also be completed:

GLM 62 Legal Environment of Business	3 Cr.
ACC 52 Financial Accounting	4 Cr.
BUSM 100 Principles of Marketing	3 Cr.
BUSG 100 Principles of Management	3 Cr.
BUSF 100 Principles of Finance	3 Cr.
Total	16 Cr.

Students may also wish to elect from Art 61, Communication 64 and Computer Science 17.

Foods Merchandising

This program is for students in Home Economics who wish to have careers in some area of merchandising in the foods industry.

Requirements. A minimum of 32 credit hours in Home Economics is required, which must include Home Economics 2, 8 and 140.

Other Home Economics courses for this program include 5, 6, 45, 51, 125, 126 and 149.

Other Arts and Sciences courses required are Biology 25, Chemistry 43 and 44, Communication 45, Economics 71, English 57, Psychology 51, and Sociology 1 and 26.

The following courses from the College of Business Administration must also be completed:

GLM 62 Legal Environment of Business	3 Cr.
ACC 52 Financial Accounting	4 Cr.
BUSM 100 Principles of Marketing	3 Cr.
BUSG 100 Principles of Management	3 Cr.
BUSF 100 Principles of Finance	3 Cr.
Total	16 Cr.

Students may wish also to elect from Communication 64 and Computer Science 17.

Interior Design

This program is for students in Home Economics who wish to have careers in some area of the interior design field.

A minimum of 32 credit hours in Home Economics is required, which must include Home Economics 2, [-7 or 45]-, and 140.

Other Home Economics courses for this program include 4, 8, 102, 104, 114, 152 and 194.

Also required is an Art minor including Art 21, 31, 32, 61, 74, 101, 102, 111 (Modern Design and Architecture), 131 and 199.

Other requirements are Biology 25, Chemistry 43 and 44, Communication 45, Psychology 51, and Sociology 1 and 26.

Dietetics

This program is for students in Home Economics who wish to have careers in the field of dietetics. The graduate of this program may choose to pursue a dietetic internship and take the registration examination, thus aspiring to become a Registered Dietitian.

A minimum of 37 credit hours in Home Economics is required, which must include Home Economics 8 and 140. The other Home Economics courses for this program include 5, 6, 45, 51, 125, 126, 149, 162, 164 and 196. Other requirements are Accounting 52, Biology 51, 52 and 110, BUSG 100, Chemistry 43, 44 and 105, Communication 45, Economics 71, Education 96, English 57, Mathematics 35, Psychology 51, and Sociology 1.

Students who enter this program after their freshman year may find that one or more additional semesters are required to complete the program.

This curriculum meets the American Dietetic Association requirements for a Plan IV undergraduate general emphasis program. In addition to this plan of study,

it is necessary to complete a postgraduate clinical experience component and pass the registration examination to become a Registered Dietitian. Details may be obtained from the program adviser.

Other Plans

The Department also offers programs of study in other areas: Home Economics/Journalism, Home Economics/Liberal Arts Business Minor and other interdisciplinary approaches.

1. Apparel Construction and Evaluation.

1+4, Cr. 2. A study of the individual units of apparel construction to help develop a foundation for buying fabrics and fashions. Appraisal techniques for ready-to-wear apparel are included.

2. Interdisciplinary Aspects of Clothing.

Cr. 3. An interdisciplinary approach to the study of the social, psychological, historical, cultural, economic and aesthetic forces that affect clothing behavior. (Field trip may be arranged.)

4. Elementary Graphics.

(Also offered as General Engineering 4.) 1+3, Cr. 2. A course to acquaint the student with the graphic techniques of lettering and line work, scale drawing and size description, and orthographic projection. Emphasis is on architectural drawings. A survey of methods, practices and techniques of home construction is included. (Not open to engineering students.) Prerequisite: sophomore standing. Given in alternate years.

5. Foods.

Cr. 3. A course covering the history of food from ancient to modern times, the food market structure, international aspects and those factors which affect human food habits.

6. Principles of Food Preparation.

2+4, Cr. 3. Emphasis on the application of scientific principles to the preparation of food and the ability to evaluate the quality of prepared food.

7. Fundamental Nutrition.

Cr. 3. A study of the basic principles of human nutrition with emphasis on practical application.

8. Art in Daily Living.

Cr. 3. A study of design elements and principles in relation to our human environment. The goal is to develop aesthetic awareness and evaluation skills. Field trip may be arranged.

20. Flat Pattern Design.

1+4, Cr. 3. Principles of designing with the flat pattern and fitting garments. Evaluation of various construction methods in relationship to style, fabric construction and end use. Prerequisite: Home Economics 1 or consent of the Chair of the Department.

45. Human Nutrition.

Cr. 3. Basic principles of human nutrition including the functions, requirements and food sources of nutrients. Prerequisite: Chemistry 44.

51. Meal Management.

1+6, Cr. 4. The fundamentals of planning, preparing and serving meals with emphasis on the control of time, money, energy and equipment. Prerequisites: Home Economics 6 and -7 or 45-.

52. Tailoring.

1+5, Cr. 3. Custom hand and speed tailoring techniques are compared by constructing a blazer or coat. Field trip arranged if time permits. Prerequisite: Home Economics 20 or the consent of the Chair of the Department.

90. First Aid, Health and Safety.

(Also offered as Physical Education 90.) Cr. 2. Seven weeks course. A study of health concerns as they relate to the needs of the family: the prevention and emergency care of sudden illness and injury.

102. Interior Design.

3+0, Cr. 3 or 3+3, Cr. 4. Applications of the principles of art to the design of the home and its furnishings as demonstrated in historic and contemporary dwellings. An additional credit may be earned only by interior design majors through a field experience. Field trip arranged for the field experience and the class. Prerequisites: Home Economics 8 and junior standing or consent of the Chair of the Department.

104. Textiles.

2+2, Cr. 3. Textile fibers, yarns, fabric constructions and finish characteristics in relation to satisfactory performance for consumer use are studied. A goal is the development of evaluation skills for textile care and use through study and objective textile testing. Field trip may be arranged. Prerequisites: junior standing or consent of the Chair of the Department; Chemistry 44.

114. Housing and Equipment.

Cr. 4. A study of family housing needs as influenced by family life cycle, geographic location, income and sociological factors. Problems concerning the choice of house plans, exterior designs and home construction practices are included. Home equipment including purchasing, operation, care and servicing are also considered. Field trip. Prerequisite: junior standing.

125. Experimental Foods.

1+5, 11. 3. A course in food science theory and preparation using sensory and objective methods for evaluation of food products. Recipe development and applications to the food industry are included. Prerequisites: Home Economics 6 and Chemistry 44.

126. Cultural Aspects of Food.

2+3, Cr. 3. A study of the historical, social, psychological, economic, religious and aesthetic significance of food customs in various cultures. Prerequisite: senior standing or consent of the Chair of the Department.

133. Fashion Promotion.

3+0, Cr. 3. A fashion marketing foundation for advertising and promotion. Includes practical experience in display work, advertising, sales techniques and production of special events, such as fashion shows and fashion videos. A field trip is required. Prerequisites: Home Economics 2 and 8; junior standing or consent of the instructor.

135. Fashion Merchandising and Buying.

3+0, Cr. 3, or 3+3, Cr. 4. The study of planning, buying and selling of apparel, including stock turnover, markdowns, obsolescence factors, and the difficulty of evaluating and predicting consumer merchandise preferences. An additional credit may be earned through an internship. Prerequisite: Home Economics 133.

140. Child Care and Development.

3+2, Cr. 4. A study of factors affecting the developmental aspects of the child from birth through age five. Observation and participation with a preschool child in a family setting and preschool visitations are included. Prerequisites: Psychology 51 and junior standing.

149. Quantity Food Service.

2+4, Cr. 3. A study of quantity food production and service. Consideration is given to menu planning, production and service methods, storage facilities, equipment and sanitation necessary for institutional food service. Field trips and laboratory arranged to observe and study various types of food service operations. Prerequisite: Home Economics 51.

150. Organization and Management of Food Services.

Cr. 3. The philosophy and functions of management in food service systems. Considers the complexities of the organization with its inherent problems and emphasizes the supervision of personnel, as well as the control of equipment, time, money and materials. Prerequisites: Home Economics 149 and Accounting 52 or consent of the Chair of the Department.

152. Management in Family Living.

Cr. 3. Home management principles and use of personal and family resources are studied.

162. Advanced Nutrition.

Cr. 3. An advanced study of the metabolism of nutrients and nutrient requirements during the life

cycle. Techniques for the evaluation of nutritional status are included. Prerequisites: Home Economics 45, Biology 51 and 52, and Chemistry 44 and 105 or consent of the Chair of the Department.

164. Diet Therapy.

Cr. 3. Application of the principles of human nutrition to the dietary treatment of pathological conditions. Prerequisites: Home Economics 45, Biology 51 and 52, and Chemistry 44 and 105 or consent of the Chair of the Department.

181. Cooperative Education in Home Economics I.

Cr. 0.5 - 3. Professional work experience with a cooperating employer in a specialized vocational area. Written report required. Prerequisites: junior standing and approval of the Chair of the Department. S/U grade.

182-183. Cooperative Education in Home Economics II-III.

Cr. 0.5 - 3. Continuation of Home Economics 181. Prerequisites: Home Economics 181 and approval of the Chair of the Department. S/U grade. May be repeated beyond 183 for additional credit.

194. Problems in Interior Design.

Cr. 3. This course is designed for the Senior Interior Design student, who participates in the solution of problems encountered by professional interior designers. Client interviewing, problem solving, and presentation of the student's designs are included. (Field trip(s) may be arranged.)

195. Independent Study.

Cr. 1-3. Independent work in a specialized area of home economics as agreed upon by the student and faculty adviser. Prerequisite: junior or senior standing.

196. Professional Seminar and Field Experience in Dietetics.

Cr. 2. Field work in hospitals or other health care facilities arranged with registered dietitians. Seminar discussions and presentations are based on field experiences and focus on broadening professional preparation. Prerequisite: junior or senior standing.

International Economics and Cultural Affairs

Administrative Committee:
Professor J. Peters (Foreign Languages, Chair); Professors Falkenstein (Foreign Languages) and Trost (Political Science); Associate Professors Bernard (Economics), Hansis (Geography) and Berg (History); Assistant Professor S. Baeppler (Foreign Languages)

Students who complete the International Economics and Cultural Affairs Program will have fulfilled major area requirements for the Bachelor of Arts degree under the Interdisciplinary Program Option.

Objectives. This interdisciplinary program is designed to provide essential background for students considering careers in the fields of international commerce or government service. To implement this goal, it provides a foundation in a modern language and the culture and customs of those who speak it, instruction in international economics and a survey of appropriate areas of geography, history and political science. Students interested in pursuing the International Economics and Cultural Affairs Program should confer with the Chair of the Administrative Committee.

Students are urged to take, in addition to the required courses, a number of recommended electives. A list of these recommended courses is available from the Chair.

Qualified students are encouraged to consider the following Cooperative Education courses: French 180, German 180, and Spanish 180.

Requirements. Foreign Language and Literature, 17 credit hours beyond course number 30; Economics, 15 credit hours; geography, history and political science, 18 credit hours. See below for specific courses.

Foreign Language and Literature. One of the following language options:

French	
50 Topics in French:	3 Cr.
Literature and the Fine Arts	
111	4 Cr.
French Composition and Conversation I	
114	4 Cr.
Contemporary French-Language and Communication	
116 or 117	2 Cr.
Professional French or Advanced French Translation	
130	4 Cr.
French Civilization	

German	
50 Topics in German:	3 Cr.
Literature and the Fine Arts	
111	4 Cr.
German Composition and Conversation I	
114	4 Cr.
Contemporary German Language in the Mass Media	
116 or 117	2 Cr.
Professional German or Advanced German Translation	
130	4 Cr.
German Civilization	

Spanish	
50 Topics in Spanish:	3 Cr.
Literature and the Fine Arts	
111	4 Cr.
Spanish Composition and Conversation	
114	4 Cr.
Contemporary Hispanic Society Through Communications	
116	2 Cr.
Professional Spanish: International	
130 or 131	4 Cr.
Spanish Civilization or Spanish-American Civilization	

Economics

71 and 72	6 Cr.
Principles of Economics	
126	3 Cr.
International Economics	
128	3 Cr.
Economics of Developing Nations	
160	3 Cr.
Comparative Economic Systems	

Political Science

44 or 65	3 Cr.
Comparative Politics or International Relations	
153 or 154	3 Cr.
Politics of Industrialized States or Politics of Developing States	

Geography

62	3 Cr.
Economic Geography	
The appropriate course from 101-108	3 Cr.
Regional Geography	

History

30 and 31

Origins of Latin American Civilization
and Contemporary
Latin American Civilization

or 10 and 115

Introduction to the Contemporary
World and Contemporary Europe

or 141 and 142

History of Modern China
and History of Modern Japan

6 Cr.

In addition to the above, a senior research project earning 3 credit hours is required in one of the following course numbers: French 190, German 190, Spanish 190, Economics 190, Political Science 195, Geography 195 or History 180. The project shall be under the jurisdiction of the department appropriate to the subject selected for the research. The proposal for the special senior research project must be submitted no later than the end of the student's junior year.



Liberal Arts Business Minor

Administration. This program is administered by the Dean of the College of Arts and Sciences.

Objective. The objective of the Liberal Arts Business Minor is to introduce nonbusiness majors to the functional areas of business administration. This program is especially appropriate for students who plan to enter the job market after graduation with a traditional major from the College of Arts and Sciences.

Requirements.

Economics 71	3 Cr.
English 57	3 Cr.
Accounting 52	4 Cr.
General Management GLM 62	3 Cr.
Marketing BUSM 100	3 Cr.
Management BUSG 100	3 Cr.
Finance BUSF 100	3 Cr.
Total	22 Cr.

The Liberal Arts Business Minor is *not* a fraction of a Business Major. The Business courses numbered 100 are not identical to those required of Business majors and **will not count** toward the completion of a major in Business

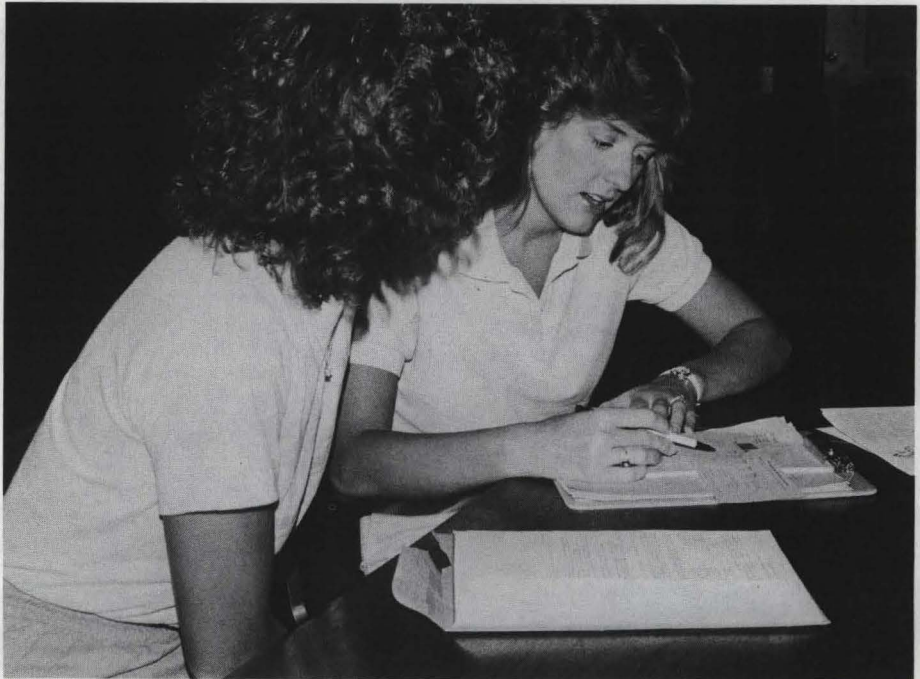
Administration. In addition to required courses, students are strongly encouraged to take Economics 72 (Principles of Economics—Macro).

Arts and Sciences students who are considering the possibility of becoming Business Majors **must** take the prerequisite courses in mathematics, statistics, etc., in order to qualify for admission to the College of Business Administration.

Students who intend to complete the Liberal Arts Business Minor are strongly encouraged to consult with the office of the Dean of the College of Arts and Sciences to obtain proper advising.

All sixteen of the credits earned in the courses offered by the College of Business Administration may be applied toward the 124 required for graduation with a Bachelor's degree in the College of Arts and Sciences.

Upon completion of the minor, the designation, "Liberal Arts Business Minor," is placed on the student's transcript.



Mathematics and Computer Science

Professors Foster, D. Johnson, Mundt, Sanford, Sorenson; Associate Professors Brewer, Caristi, Carlson, Hughes, Krebs, J. Lehmann, Marion (Acting Chair), Reynolds, Wagenblast; Assistant Professors Gillman, Hull, Sullivan, Treanor; Instructor Sattler.

Mathematics is the disciplined form of communication which serves both to lend structure to scientific, engineering and economic principles, and to provide a beauty of formalism in its own right. It is characteristic that many important mathematical discoveries have been made by scientists, while at the same time pure mathematics has opened up unexpected new advances in science.

As a data processing tool, the computer has made possible extending both numerical manipulation and forms of language communication far beyond ordinary human capabilities. Computing has developed languages of its own to ease the human-machine interface. Learning how best to use these languages and to design strategies for problem solving are major objectives of Computer Science. Computer science also studies computer design and computer architecture and the integration of computer components into systems.

Careers in mathematics and computer science include mathematical research, statistics, analytical theory, teaching, systems programming, applications programming and information management.

Mathematics

Major. A minimum of 28 credit hours in Mathematics constitutes a major. Courses must include those in one of the following programs.

Program 1. (Emphasis on Mathematical Analysis): Mathematics [71 or 75], [72 or 76], [73 or 77], 95, 106, 107, 114, [177 or 184], 193 and [194 or 196].

A Program 1 Mathematics major must also complete a computer programming course. It is recommended that this course be taken during the freshman year.

A student seeking the Bachelor of Science degree with a major in

Mathematics must complete Program 1 with at least 32 credit hours in Mathematics.

Program 2. (Emphasis on Discrete Mathematics): Mathematics 51, 52, 53, 54, 95, 101, [112 or 114], [132 or 163], 193, [194 or 196].

A Program 2 Mathematics major must also complete Computer Science 38, 48 or 58.

A student having a Mathematics major in view should begin mathematics in the freshman year. A Mathematics major should elect French or German to satisfy the foreign language component of the general education requirements. Anyone planning to do graduate work in Mathematics should complete Program 1 and include Mathematics 177.

Minor. A minimum of 15 credit hours in Mathematics, including one of the courses 36, 52, 72 or 76 constitutes a minor. No more than two of the following courses may be included: Mathematics 35, 36, 43, 44, 50, 51, 52, 55, 71, 72, 75 and 76.

Teaching Programs. Students who plan to teach mathematics in secondary schools with a major or minor in Mathematics should consult the Chair of the Department and the Education Department for specific requirements.

Placement Examination. All students entering Valparaiso University should take the Mathematics Placement Examination during orientation. Before registration, the Department of Mathematics and Computer Science will recommend which course(s) each student should take. A student who is recommended for Mathematics 14 or 35 or 50 *may not* take a course numbered above 50 without the consent of the Chair of the Department or his designated representative.

Degree. Completion of the degree requirements of the College of Arts and Sciences with a Program 1 major in Mathematics leads to the degree Bachelor of Arts or Bachelor of Science.

Completion of the degree requirements of the College of Arts and Sciences with a Program 2 major in Mathematics leads to the degree Bachelor of Arts.

Approval of Schedules. All students taking a major or minor in the Department must have their schedules approved by

the Chair of the Department or his representative before registration each semester.

14. Mathematical Ideas.

Cr. 4. (See paragraph on Placement Examination.) A one-semester course intended primarily for students majoring in the humanities. Important concepts in mathematics are studied from a non-technical point of view. Restricted to students who have not previously completed a college mathematics course.

35. Elementary Finite Mathematics.

Cr. 4. (See paragraph on Placement Examination.) A course for students not majoring in Mathematics or the physical sciences. Topics include a review of algebra, sets, linear functions and their graphs, applications of linear functions, sequences and mathematics of finance, elementary matrix theory, solutions of systems of linear equations, an introduction to linear programming and finite probability.

36. Functions and Intuitive Calculus of One Variable.*

Cr. 4. This course is intended for students not majoring in mathematics or the physical sciences. Topics include inequalities; polynomial, exponential and logarithmic functions and their graphs; composition and inverses; differential and integral calculus, and applications. Prerequisite: Mathematics 35 or 51 or the equivalent.

41. Laboratory in Elementary Mathematics I.

0+1, Cr. 0. This course is designed to provide an opportunity for prospective elementary teachers to learn mathematical concepts in an active, materials-oriented context and to acquaint them with materials appropriate for use in the elementary school. Topics correspond to those in Mathematics 43. Enrollment is restricted to students majoring in elementary education. Prerequisite: concurrent registration in Mathematics 43. S/U grade.

42. Laboratory in Elementary Mathematics II.

0+1, Cr. 1. A continuation of Mathematics 41. Topics correspond to those in Mathematics 44. Prerequisite: concurrent registration in Mathematics 44. S/U grade.

43. Mathematics for Elementary Teachers I.

Cr. 4. This course is restricted to students majoring in elementary education. Topics include elementary logic, sets, problem solving, numeration systems, the whole number system, the rational number system and elementary number theory.

44. Mathematics for Elementary Teachers II.

Cr. 4. A continuation of Mathematics 43. Topics include two- and three-dimensional geometry, measurement, functions, graphing, probability and statistics. Prerequisite: Mathematics 43.

50. Precalculus.

Cr. 1-4. (See paragraph on Placement Examination.) A course for students who plan to

take a calculus sequence. Topics may include sets and numbers, relations and functions, trigonometric functions, exponential and logarithmic functions. This course may not be used to fulfill the general education requirement in the College of Arts and Sciences.

51. Finite Mathematics.

Cr. 4. (See paragraph on Placement Examination.) A course for students with a good foundation in mathematics who are interested in mathematical models for the life, management or social sciences. Topics include matrix algebra, linear programming, finite probability, sequences, and mathematics of finance. Prerequisite: Mathematics 50 or the equivalent.

52. Intuitive Calculus of One or More Variables.

Cr. 4. A course for students with a good foundation in mathematics who are interested in mathematical models for the life, management or social sciences. Topics include limits, continuity, derivatives and their applications, integrals and their applications and selected topics in multivariate calculus. Prerequisite: Mathematics 50 or the equivalent.

53. Intermediate Analysis.

Cr. 3-4. A continuation of Mathematics 52. Topics include sequences and series, conic sections, parametric equations and an introduction to differential equations. Prerequisite: Mathematics 52 or the equivalent.

54. Statistical Analysis**

Cr. 3-4. A course in statistical methods for students not majoring in mathematics. Topics include probability, empirical and theoretical frequency distributions, sampling, correlation and regression, testing hypotheses, estimation of parameters. Emphasis is placed on illustrations and applications of these techniques to the social sciences and business. This course is not open to any student who has had a first statistics course in any department. Prerequisite: Mathematics 51 and 52 or the equivalent.

55. Elementary Discrete Mathematics.

Cr. 4. An introduction to concepts that provide a mathematical foundation for computer science. Topics include logical reasoning with emphasis on methods of proof, counting techniques and simple finite probability, sets, functions, relations, matrix algebra, graph theory, and recurrence relations and difference equations. Prerequisite: Mathematics 52 or 71 or 75.

71. Analytic Geometry and Calculus I.

Cr. 5. (See paragraph on Placement Examination.) A first course in the calculus sequence designed for students who plan to major in mathematics, engineering or a physical science. In contrast to Mathematics 75, more time is devoted to the precalculus aspects of the material and to comprehensive treatment of trigonometric functions. Topics include an extensive review of set theory, the real number system, inequalities, absolute value, elementary functions and their graphs, and continue to

*Credit for Mathematics 36 may be earned through the College Level Examination Program subject examination in Introductory Calculus.
**Credit for Mathematics 54 may be earned through the College Level Examination Program subject examination in Statistics.

limits, continuity and derivatives; applications of the derivative; an introduction to the theory of the integral.

72. Analytic Geometry and Calculus II.

Cr. 5. A continuation of Mathematics 71. Topics include techniques of integration; applications of the definite integral; exponential, logarithmic and inverse trigonometric functions; indeterminate forms and improper integrals; sequences and series. Prerequisite: Mathematics 71 or 75.

73. Analytic Geometry and Calculus III.

Cr. 4. A continuation of Mathematics 72. Topics include conic sections, vector algebra, space curves, calculus of functions of several variables, multiple integration, calculus of vector fields. Prerequisite: Mathematics 72 or 76.

75. Calculus I.*

Cr. 4. (See paragraph on Placement Examination.) A first course in the calculus sequence designed for students who plan to major in mathematics, engineering or a physical science. Topics include a brief review of precalculus mathematics (set theory, the real number system, inequalities, absolute value, algebraic and trigonometric functions); limits, continuity and derivatives; applications of the derivative; an introduction to the theory of the integral; techniques of integration.

76. Calculus II.*

Cr. 4. A continuation of Mathematics 75. Topics include applications of the definite integral; additional techniques of integrations; exponential, logarithmic and inverse trigonometric functions; indeterminate forms and improper integrals; sequences and series. Prerequisite: Mathematics 75.

77. Calculus III.

Cr. 4. A continuation of Mathematics 76. Topics include conic sections, vector algebra, space curves, calculus of functions of several variables, multiple integration, calculus of vector fields. Prerequisite: Mathematics 76.

89. Topics in Mathematics.

Cr. 1-3. Topics may include problem solving techniques, computer applications or topics from finite mathematics. Prerequisite: consent of the instructor.

95. Foundations of Advanced Mathematics.

Cr. 3. An introduction to the type of mathematical reasoning and subject matter which will be encountered in advanced mathematics. Topics include basic logic, set theory, relations and functions, and infinite sets. Prerequisite: Mathematics [51 and 52] or 72 or 76 or the equivalent.

101. Vectors and Linear Algebra.

Cr. 3. Vectors in 2-space and 3-space, systems of linear equations and matrices, determinants, vector spaces, eigenvalues and eigenvectors, applications. Prerequisite: Mathematics 51 and 52 or 72 or 76.

104. Differential Equations and Linear Algebra.

Cr. 4. Elementary and linear differential equations, applications of differential equations, matrices and systems of linear equations, eigenvalues and eigenvectors, introduction to systems of linear differential equations. Prerequisite: Mathematics 72 or 76.

106. Linear Algebra.

Cr. 3. Systems of linear equations and matrices, determinants, vector spaces, linear transformations, inner products, eigenvalues and canonical forms. Prerequisite: Mathematics 73 or 77.

107. Differential Equations.

Cr. 3. Elementary and linear differential equations, systems of equations, series solutions including the method of Frobenius, applications. Prerequisites: Mathematics [73 or 77] and [104 or 106].

112. Discrete Mathematical Structures.

Cr. 3. A study of discrete mathematical structures and their applications in computer science. Topics include graph theory, groups and semi-groups, lattices, boolean algebra, formal grammars, coding theory and mathematical techniques in program verification. Prerequisite: Mathematics 55 or 95 or 104 or 106.

114. Abstract Algebra I.

Cr. 4. This course provides an introduction to modern abstract algebra. Topics include relations, operations and set algebra; congruences and number systems, properties of groups, rings and fields. Prerequisite: Mathematics 52 or 72 or 76 or 95.

132. Introduction to Operations Research.

Cr. 3. A survey of deterministic and probabilistic models used in operations research and management science. Topics include linear programming, inventory models, networks, queues, Markov chains, dynamic programming and simulation. Prerequisites: Mathematics [101, 104 or 106] and [54 or 145]. Offered upon sufficient demand.

137. Numerical Methods.

(Also offered as Computer Science 137). Cr. 3. The analysis and implementation of basic numerical techniques: matrix methods for the solution of systems of equations, interpolating polynomials, finite differences, numerical differentiation and integration, numerical solution of differential equations, zeros of non-linear equations and error analysis. Students are expected to solve problems using a digital computer. Prerequisites: Computer Science 25 or its equivalent and one of the following: Mathematics 107; Mathematics [73 or 77] and 104; or Mathematics 53 and 101.

145. Probability and Statistics.

Cr. 3-4. An introduction to probability and statistics, including probability spaces, random variables, classical discrete and continuous probability distributions, correlation and

*Credit for Mathematics 75 may be earned through the College Level Examination Program subject examination in Introductory Calculus. Credit for Mathematics 75 and 76 may be earned through the Advanced Placement examinations offered by the College Entrance Examination Board.

regression, the central limit theorem and elementary applications of these topics to statistical inference. Prerequisite: Mathematics 73 or 77.

146. Mathematical Statistics.

Cr. 3. A continuation of Mathematics 145. New topics include sampling theory, estimation, tests of hypotheses, analysis of variance and non-parametric statistics. Prerequisite: Mathematics 145. Offered upon sufficient demand.

154. Elements of Geometry.

Cr. 4. Logic, axiom systems and models; consistency, independence and completeness, consideration of the foundations of Euclidean geometry; topics from projective geometry. Prerequisite: Mathematics 36 or 52 or 95.

163. Mathematical Models in the Life and Social Sciences.

Cr. 3. Topics are chosen according to the interests of the class. These may include utility and measurement, graph theory, game theory, learning models, models of growth processes, simulation. Prerequisites: a statistics course and one of the following: Mathematics 36, 52, 72 or 76. Offered upon sufficient demand.

166. History of Mathematics.

Cr. 3. A survey of the development of mathematics from the earliest times to the present. Special emphasis on topics in geometry, algebra and elementary calculus which are related to secondary school mathematics. This course may not be counted toward a major or a minor in Mathematics. Prerequisite: Mathematics 36 or 52 or the equivalent. Given in alternate years.

177. Analysis.

Cr. 4. Differentiation and convergence in real n -space, implicit function theorems, topology of the real line and metric spaces, theory of the integral, multiple integration and the Jacobian, uniform convergence. Prerequisite: Mathematics 104 or 106 and, beginning Fall, 1987, Mathematics 95.

182. Introduction to Complex Variables.

Cr. 3. Analytic functions, derivatives, power and Laurent series, integrals, residues, conformal mapping, complex inversion formula for the LaPlace transform, applications to partial differential equations. Prerequisite: Mathematics 104 or 107. Offered upon sufficient demand.

184. Applied Mathematics.

Cr. 4. Fourier series and orthogonal functions, Bessel and gamma functions. Sturm-Liouville systems, initial and boundary value problems involving partial differential equations, LaPlace transforms and other selected topics. Prerequisite: Mathematics 107.

186. Vector and Tensor Analysis.

Cr. 2-3. Topics include curvilinear coordinates, divergence, curl, line and surface integration, vector integration theorems, cartesian tensors. Prerequisite: Mathematics 73 or 77. Offered upon sufficient demand.

189. Advanced Topics in Mathematics.

Cr. 3. An advanced course for mathematics majors. The topic studied, which may change from year to year, is ordinarily one of the

following: number theory, advanced abstract algebra, differential geometry, partial differential equations, measure and integration or functional analysis. Prerequisite: consent of the Chair of the Department. Specific course requirements depend on the content. Offered upon sufficient demand.

191. The Teaching of Mathematics.

Cr. 2. (See Education 191.) A study of the methods of teaching mathematics in secondary schools. Prerequisite: admission to Supervised Teaching. This course may not be counted toward a major or a minor in Mathematics.

193. Mathematics Colloquium.

Cr. 0. Students are required to attend the sessions of Mathematics 194 and participate in the discussion of topics by faculty and students. Prerequisites: junior or senior standing and Mathematics 101, 104 or 106. S/U grade.

194. Mathematics Colloquium.

Cr. 1. Student presentation of selected topics in mathematics arising from the mathematical literature. Prerequisite: Mathematics 193.

195. Independent Study in Mathematics.

Cr. 1-3. Students study advanced topics in mathematics under the supervision of a faculty member. Written work is required. Prerequisite: consent of the Chair of the Department.

196. Research in Mathematics.

Cr. 3. Each student must undertake a research problem in mathematics under the direction of a faculty member. Written and oral reports are required. Prerequisite: consent of the Chair of the Department.

197. Honors Work in Mathematics.

Cr. 3. See Honors Work, page 38.

198. Honors Candidacy in Mathematics.

Cr. 3. See Honors Work, page 38.

Computer Science

Major. A minimum of 28 credit hours in Computer Science constitutes a major. Courses must include Computer Science 57, 58, 86, 87, 90, 91, 116, 129. Of the remaining credits all must be from Computer Science courses numbered above 20, including 3 credits from Computer Science courses numbered above 80.

Majors must complete the following mathematics courses: Mathematics 52 or 72 or 76; Mathematics 55 or 90; Mathematics 101 or 104 or 106; Mathematics 54 or 145; and Mathematics 112.

A student seeking the Bachelor of Science degree with a major in Computer Science must complete the above program. In addition the student must complete Computer Science 118 and [25

or 64]. The minimum number of credits in Computer Science for the Bachelor of Science degree is 32.

Computer Science majors who elect to or who must satisfy the foreign language component of the general education requirements should take German or French.

A student planning to major in Computer Science should begin both Computer Science and Mathematics in the freshmen year.

Minor. Two minors are offered.

A *Computer Science* minor consists of a minimum of 15 credit hours in computer science. Courses must include Computer Science 57, 58, 90, [86 or 91], and one 3 credit Computer Science course numbered above 80. In addition, the student must complete Mathematics [52 and 55] or [71 and 72] or [75 and 76] and 54 or 145.

An *Information Systems* minor consists of a minimum of 15 credit hours in computer science. Courses must include Computer Science 17, 64, 65, 66, and 67. In addition, the student must complete one course in accounting and work in mathematics equivalent at least to Mathematics 51 and 52. It is also recommended that the student take one additional course in management.

Cooperative Education. Qualified students may combine semesters of professional experience with other semesters of traditional academic studies, often lengthening their college education beyond the normal eight semesters. During the semesters of their employment, students are financially reimbursed by the cooperating employer and receive credit toward the computer science major. For each semester, students may receive up to 3 credits: 1 credit for a parallel experience, 2 credits for a summer experience, or 3 credits for a full-time semester experience. No more than 3 credits may be counted toward the minimum major requirements of the Computer Science minor or the Information Systems minor. (An exception may be made in the case of the Bachelor of Science degree, where up to 4 credits in Cooperative Education may be counted toward the 32-hour single major.) If these credits are used to fulfill minimum credit hour requirements for a major or minor, at

least two computer science experiences are required, at least one of which must not be a parallel experience. In addition to meeting the College of Arts and Sciences 2.5 cumulative grade point average requirement, students must present a 2.5 grade point average for all required Computer Science courses in the major taken prior to participation in the Cooperative Education program. (For further information, refer to Cooperative Education, College of Arts and Sciences, page 39.)

Note: (1) A student may use 4 credit hours from any one of the following course combinations to apply toward the Natural Science and Mathematics component of the general education requirements: Computer Science 17 and 21, or 17 and 22, or 47 and 27, or 47 and 48, or 57 and 25, or 57 and 58. (2) At most, 4 credit hours from the Computer Science courses numbered 21-29 may be applied toward degree requirements.

17. Computers and Their Uses.

Cr. 3. A survey of computers, including their uses, limitations and effect on society. Specific topics include computer hardware, programming languages with emphasis on BASIC, text processing and program packages.

21. BASIC Programming.

Cr. 1-3. (Normally 3 Cr. A 1-Cr. version for science majors is offered as needed.) An introduction to computer problem-solving techniques using the BASIC language. Not open to students who have completed an algorithmic course (Computer Science 47, 57 or General Engineering 20). Prerequisite: proficiency in algebra.

22. FORTRAN Programming.

Cr. 3. Introduction to computer problem-solving techniques using the FORTRAN language. Not open to students who have completed an algorithmic course (Computer Science 47, 57 or General Engineering 20). Prerequisite: proficiency in algebra.

25. The FORTRAN Language.

Cr. 2. An introduction to FORTRAN as a second programming language. Not open to students who have completed Computer Science 22 or 47 or General Engineering 20 (FORTRAN). Prerequisite: Computer Science 57 or General Engineering 20.

27. The PASCAL Language.

Cr. 2. An introduction to PASCAL as a second programming language. Not open to students who have completed Computer Science 57 or General Engineering 20. Prerequisite: Computer Science 48 or the equivalent (may be taken concurrently).

28. Topics in Computer Programming.

Cr. 1 (7 weeks) or 2 (semester). The content of this course may change from semester to

semester, but is ordinarily a study of a computer programming language not covered in other Computer Science courses. This course may be repeated for credit, provided that topics are different. Prerequisite: usually equivalent to Computer Science 47 or 57. Specific requirements depend on course content.

38. Algorithms and BASIC Programming II.

Cr. 3. A continuation of Computer Science 37, with emphasis on data structures and the development of structure and discipline in program design and style, especially for intermediate size programs. Prerequisite: Computer Science 37 and Mathematics 51, 71 or 75. (Offered for the last time, Fall 1986.)

47. Algorithms and FORTRAN Programming I.

Cr. 3. A fundamental course in algorithm development and problem solving and an introduction to the use of a computer system with special emphasis on the programming constructs of the language FORTRAN 77. In order to solve problems in a computer environment, the student designs elementary algorithms and writes, debugs and documents FORTRAN programs for the implementation of those algorithms. Not recommended for students who have had Computer Science 57 or General Engineering 20. Prerequisite: one of Mathematics 52, 71 or 75 (may be taken concurrently).

48. Algorithms and FORTRAN Programming II.

Cr. 3. A continuation of Computer Science 47 with emphasis on the development of structure and discipline in program design and style, especially for intermediate size programs. Prerequisites: Computer Science 47 and Mathematics 52, 71 or 75.

57. Algorithms and PASCAL Programming I.

Cr. 3. A fundamental course in algorithm development and problem solving and an introduction to the use of a computer system with special emphasis on the programming constructs in the language PASCAL. In order to solve problems in a computer environment, the student designs elementary algorithms and writes, debugs and documents PASCAL programs for the implementation of those algorithms. Not recommended for students who have had Computer Science 37, 47 or 62 or General Engineering 20. Prerequisite: Mathematics 52, 71 or 75 (may be taken concurrently).

58. Algorithms and PASCAL Programming II.

Cr. 3. (Also offered as Electrical and Computer Engineering 21.) A continuation of Computer Science 57, with emphasis on the development of structure and discipline in program design and style, especially for intermediate size programs. Prerequisites: Computer Science 57 or General Engineering 20 and Mathematics 52, 71 or 75.

64. COBOL Programming I.

Cr. 3. An introduction to computer programming in a business environment. Emphasis on the fundamentals of structured program design and development, testing, implementation and documentation of common business-oriented applications using COBOL. Prerequisite:

Computer Science 17 or 47 or 57 or General Engineering 20.

65. COBOL Programming II.

Cr. 3. A continuation of Computer Science 64 with emphasis on structured methodology of program design and development, especially for intermediate size programs. Includes coverage of sequential and random access files and the techniques for manipulating them in COBOL. Prerequisite: Computer Science 64.

66. Systems Analysis Methods.

Cr. 3. Models of data processing systems, data collection and organization, cost analysis, aspects of system design, file and data base design, documentation, testing, implementation and maintenance, security and control, management considerations. Prerequisite: Computer Science 65.

67. Structured Systems Analysis and Design.

Cr. 3. Advanced study of structured systems development. Emphasis on strategies and techniques of structured analysis and structured design for producing logical methodologies with complexity in the development of information systems. Prerequisite: Computer Science 66.

81. Cooperative Education in Computer Science I.

Cr. 0.5 - 3. The application of computer science concepts in a professional setting. Grade based on employer's evaluation and student's written and oral reports. Prerequisites: Computer Science 66 or 91; approval of Cooperative Education Adviser and the Chair of the Department. S/U grade.

82-83. Cooperative Education in Computer Science II-III.

Cr. 0.5 - 3. Continuation of Computer Science 81. Prerequisites: Computer Science 81 and approval of the Chair of the Department. S/U grade. May be repeated beyond 83 for additional credit.

86. Computer Architecture and Programming.

Cr. 3. (Also offered as Electrical and Computer Engineering 122.) Fundamentals of the structure of digital computers and an introduction to assembly language programming. Topics include machine instructions, data representation, addressing techniques and program segmentation and linkage. Prerequisite: Computer Science 58.

87. Digital System Design.

(Also offered as Electrical and Computer Science Engineering 120.) Cr. 3. Fundamentals of logic design, information transfer and control in a digital system, organization and structure of hardware components of digital computers. Prerequisite: Computer Science 58.

90. Introduction to Data Structures.

Cr. 3. A detailed study of various data structures, including stacks, queues, linked lists and trees. The emphasis will be on algorithms to build and manipulate the data structures, various implementations, time analysis of the algorithms and applications, such as garbage collection. Prerequisites: Computer Science 58 and Mathematics 55 or 72 or 76.

91. File Structures and Algorithms.

Cr. 3. Organization and manipulation of sequential, keyed-sequential and random access files. External search, sort and merge algorithms. File structures in data base management systems. Prerequisite: Computer Science 58.

94. Simulation and Modeling.

Cr. 3. An introduction to computer simulation of mathematical models of discrete and continuous phenomena. Some standard simulations are examined, other implemented using a simulation language. Prerequisites: Computer Science 48 or 58; Mathematics 52 or the equivalent, and a course in probability and statistics. Offered upon sufficient demand.

105. Database Management Systems.

Cr. 3. Concepts and structures used in designing and implementing database management systems. Topics include the important data models, normalization, data dictionaries, languages for data definition and manipulation, security, integrity, and reliability. Prerequisite: Computer Science 90 and 91.

116. Organization of Programming Languages.

Cr. 3. Formal language constructs as exhibited in a variety of programming languages. Topics include syntax and basic characteristics of grammars, parsing, data types and structures, run-time considerations. Prerequisite: Computer Science 90. Recommended: Mathematics 55 or 112.

117. Operating Systems and Systems Programming.

Cr. 3. Introduction to the concepts of operating system programming and interrelationships between the operating system and machine architecture. Topics include procedures, processes, resource management and interrupt-driven processing. Students program in assembly language. Prerequisites: Computer Science 86 and 90. Offered upon sufficient demand.

118. Software Design and Development.

3+2, Cr. 4. The specification, design, implementation, documentation and testing of software systems. Principles of project management. Case studies. Prerequisites: Computer Science 90 and 91.

119. Interactive Computer Graphics.

(Also offered as Mechanical Engineering 167). Cr. 3. A study of the fundamentals of interactive computer graphics systems and software. Emphasis is placed on the concept of device-independent graphics, software, graphics display systems, graphics hardware devices, geometric transformation and projection and methods of creating visual realism. Prerequisites: Computer Science 86 and 90 and Mathematics 101 or 104 or 106.

129. Seminar in Computer Science.

Cr. 1. Student-staff presentation of selected topics in computer science arising from journal reading and research. Prerequisite: Computer Science 86, 90 and 91. Offered upon sufficient demand.

135. Analysis of Algorithms.

Cr. 3. Introduction to the study of efficiency of algorithms. Survey of some known asymptotically efficient algorithms. Elements of computational complexity including NP-complete problems. Prerequisites: Computer Science 90 and Mathematics 112.

136. Artificial Intelligence.

Cr. 3. Introduction to the techniques used in the field of artificial intelligence. Topics include knowledge representation, search strategies, and heuristic programming, with some discussion of areas such as expert systems, natural language translation, pattern recognition, learning programs, and robotics. Students will program in the LISP programming language. Prerequisite: Computer Science 116.

137. Numerical Methods.

(Also offered as Mathematics 137). Cr. 3. The analysis and implementation of basic numerical techniques: matrix methods for the solution of systems of equations, interpolating polynomials, finite differences, numerical differentiation and integration, numerical solution of differential equations, zeros of non-linear equations and error analysis. Students are expected to solve problems using a digital computer. Prerequisites: Computer Science 25 or the equivalent and one of the following: Mathematics 107; Mathematics [73 or 77] and 104; Mathematics 53 and 101.

156. Theory of Programming Languages.

Cr. 3. Concepts used in the translation of programming languages and the design of computers. Topics include grammars, scanners and symbol table manipulation, parsers and pushdown automata and techniques of automatic code generation and improvement. Applications may include general purpose languages as well as special purpose languages such as data base definition and inquiry languages. Prerequisites: Computer Science 86 and 116 and Mathematics 112. Offered upon sufficient demand.

157. Principles of Systems Programming.

Cr. 3. Problems and techniques associated with programming in systems with shared resources, e.g., operating systems and data base management systems. Topics include concurrent processes, communication and deadlock, queuing and scheduling, resource protection and access. Prerequisites: Computer Science 117 and a course in probability and statistics. Offered upon sufficient demand.

158. Senior Project.

Cr. 3. The student defines a suitable computer application, develops the necessary software using appropriate techniques and prepares documentation for the use and support of the completed system. An oral report is required. Prerequisites: Computer Science 118, senior standing and a proposal approved by the Chair of the Department.

189. Advanced Topics in Computer Science.

Cr. 3. An advanced course for computer science majors. The topic studied may change from year to year. Possible topics: data communications and networks, supercomputers, parallel processing or computer architecture. Prerequisites: consent of the Chair of the

Department. Specific course requirements depend on topic. Offered upon sufficient demand.

195. Independent Study in Computer Science.

Cr. 1-3. The student studies an advanced topic in Computer Science under the direction of a faculty member. Written work is required. Prerequisite: consent of the Chair of the Department.

196. Research in Computer Science.

Cr. 3. The student undertakes a research problem in Computer Science under the

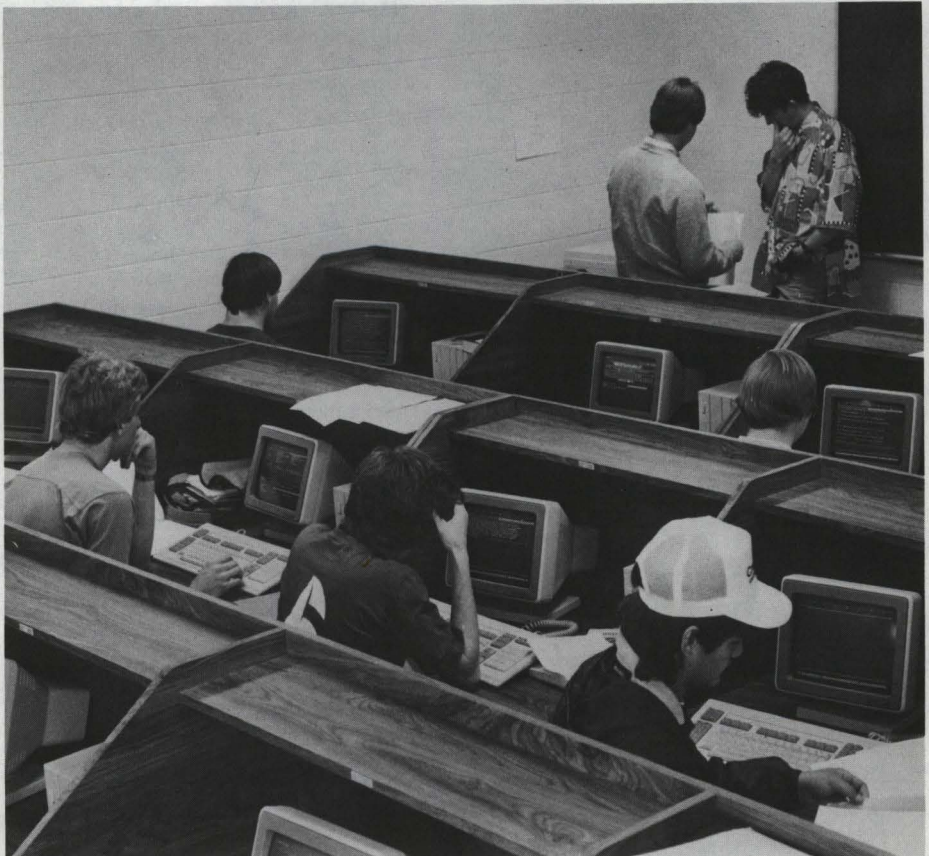
direction of a faculty member. Written and oral reports are required. Prerequisites: Computer Science 116 and 118 and a proposal approved by the Chair of the Department.

197. Honors Work in Computer Science.

Cr. 3. See Honors Work, page 38.

198. Honors Candidacy in Computer Science.

Cr. 3. See Honors Work, page 38.



Music

Professors Bergt (Chair), W. Eifrig, Gehring, Telschow; Associate Professors Balko, Lewis, McCall; Assistant Professors Bernthal, Emery, L. Ferguson.

Depending on individual interests, students may be admitted to a curriculum which leads to one of three degrees: Bachelor of Arts, Bachelor of Music or Bachelor of Music Education. An interdisciplinary program in Music Enterprises is also available. For students interested in the Deaconess Program Plan 2 combining deaconess training with church music study, see page 38.

Career opportunities in music are many and varied. Teaching in elementary, junior high or high schools and at the college level provide most of the openings for well qualified musician-educators. Church music positions are sometimes combined with school teaching or with private music instruction. Other careers are available in music merchandising, music libraries, music administration and the technical and electronic areas related to music. Music publishing and entertainment fields offer other interesting employment possibilities.

Admission. A student who wishes to enroll in any of the degree programs in music must pass an entrance test in musicianship and applied music, besides meeting all the general requirements for admission to the College of Arts and Sciences. Information regarding the entrance test, which is given before matriculation, may be obtained from the Chair of the Department.

Approval of Schedules. All candidates for the Bachelor of Arts degree taking a major in Music and all candidates for the Bachelor of Music and Bachelor of Music Education degrees must have their schedules approved by their major advisers at the beginning of each semester.

Departmental Requirements. Regulations concerning student performance, concert attendance, ensemble participation and other matters which concern majors and minors within the Department are given in the Department of Music Handbook, which is available in the Department Office.

Special Seminars and Workshops.

Visiting artists and lecturers are brought to the campus from time to time to conduct seminars and workshops in various fields of music. The Church Music Seminar, instrumental and vocal clinics, master classes by guest artists and other such events give added breadth to the students' musical education through their observation of a skilled artist or conductor at work.

Bachelor of Arts

Many students come to college with interests and abilities in several areas of study. This degree program is designed to make it possible for such students to earn a basic major in music and majors or minors in other disciplines. A candidate for this degree must meet all the general requirements for the degree.

Major. A minimum of 31 credit hours in Music constitutes a major. Courses must include Music 9, 10, 13, 14, 63 and two from Music 117, 118 and 119, and four credit hours in the student's principal instrument and six credit hours of ensemble. Students pursuing the 40 credit hour music major option must include, in addition, Music 11 and 64. The student must pass all the performance tests set for him by this Department.

Minor. A minimum of 16 credit hours in Music constitutes a minor. Courses must include Music 9, 10, 13 and 14, and four credit hours of applied music. In addition, students must pass all performance tests set for them by the Department.

Bachelor of Arts: Music Enterprises

Interdisciplinary Program

Objectives. In recent years many individuals trained in music have found it desirable and expedient to seek employment in the music industry, which is presently the seventh largest industry in the United States. Music Enterprises is an innovative, four-year interdisciplinary program in music and business. It is designed to prepare students for management positions which deal with the

manufacturing, publishing, distribution and retailing aspects of the music industry. This degree also prepares students for careers in arts management and studio teaching.

Degree. Students who complete the Music Enterprises Program fulfill the major requirements for the Bachelor of Arts degree. In addition, "Music Enterprises" is noted on their transcripts.

Requirements

General Education

For General Education Requirements of the College of Arts and Sciences see page 30.

Among the Academic Area Studies must be included Economics 71 (Studies in Social Analysis), and Mathematics 35 or 51 and Psychology 52 (Natural Science and Mathematics). Three credit hours of Music 117, 118 or 119 may be counted toward the Literature and Fine Arts component. See below.

Total General Education 56-59 Cr.

Music Core

Music 9 and 10 Basic Musicianship	6 Cr.
Music 13, 14 and 63 Music Theory	9 Cr.
Music 117, 118 or 119*	6 Cr.
History and Literature of Music	
Music 175 Music Enterprises	3 Cr.
Music 176 Internship	3 Cr.
Applied Music	4 Cr.
Ensemble	6 Cr.
Total	37 Cr.

Business Core

ACCT 52 Financial Accounting	4 Cr.
ACCT 55 Managerial Accounting	3 Cr.
GLM 62	3 Cr.
Legal Environment of Business	
BUSG 100 Principles of Management	3 Cr.
BUSM 100 Principles of Marketing	3 Cr.
BUSF 100 Principles of Finance	3 Cr.
Business elective	3 Cr.
Total	22 Cr.
Also required in the College of Arts and Sciences:	
English 57	3 Cr.
Business Communications	
Economics 72	3 Cr.
Principles of Economics-Macro	
Computer Science 17	3 Cr.
Computers and Their Uses	
Total	9 Cr.
Total required for graduation	124-127 Cr.

Bachelor of Music

For the general requirements for this degree, see page 32. The music requirements are outlined below:

1. Core Curriculum (for all students)

Basic Musicianship 9, 10, 11	9 Cr.
Music Theory 13, 14, 63, 64	12 Cr.
History and Literature of Music 117, 118, 119	9 Cr.
Basic Conducting 113	2 Cr.
Music Theory 135, 136	6 Cr.
Ensemble	8 Cr.
Total	46 Cr.

2. Other Requirements

Program:	History & Composition			
	Church Music	Literature	Composition	
PRINCIPAL INSTRUMENT: ORGAN VOICE				
Orchestration 112	—	—	2	2
Intermediate Conducting 114	2	2	—	—
Liturgical Organ Playing 115	2	2	—	—
Pro-Seminar 121 or 123	—	—	2-3	—
Hymnology 171	2	2	—	—
History of Church Music 174	2	2	—	—
Independent Study 194	—	—	3	—
Composition	—	—	—	12
Piano or Harpsichord	4	—	—	12
Organ or Harpsichord	24	8	—	—
Voice (may include Voice Class 39)	4	24	20**	—
Instruments	—	—	—	2
Total	40 Cr.	40 Cr.	27 Cr.	28 Cr.
Electives	3 Cr.	3 Cr.	10 Cr.***	9 Cr.
Total required for graduation	134 Cr.	134 Cr.	128 Cr.	128 Cr.

Program: Applied Music

PRINCIPAL INSTRUMENT: ORGAN OR HARPSICHORD				
	PIANO	VOICE	ORCHESTRAL INSTRUMENT	
Intermediate Conducting 114	—	—	2	—
Language Dictation 110, 111	—	—	2	—
Pro-Seminar in Pedagogy of Music 123	2	2	—	2
Piano or Harpsichord	4	24	4	—
Organ or Harpsichord	24	—	—	—

*Six credit hours in History and Literature of Music are required, of which three can be used to fulfill the Literature and Fine Arts component of the general education requirements.

**Applied music must include at least eight credit hours in keyboard instruments and it must include a principal medium of at least eight credit hours.

***Recommended: a second foreign language, a course in Non-Western Studies.

Voice (may include Voice Class 39)	—	—	24	—
Principal orchestral instrument	—	—	—	24
Total	30 Cr.	26 Cr.	32 Cr.	26 Cr.
Electives	7 Cr.	11 Cr.	5 Cr.	11 Cr.
Total required for graduation	128 Cr.	128 Cr.	128 Cr.	128 Cr.

Bachelor of Music Education

The general requirements for this degree are given on page 32. The music requirements are outlined below:

1. Core Curriculum (for all majors)

Basic Musicianship 9, 10, 11	9 Cr.
Music Theory 13, 14, 63, 64	12 Cr.
History and Literature of Music 117, 118 and 119	9 Cr.
Basic Conducting 113	2 Cr.
Ensemble	8 Cr.
Total	40 Cr.

2. Other Requirements

Licensing

Areas:	Choral	General	Instrumental	Area
Principal Performing Area				
Voice or instrument other than piano or organ	12	12	12	12
Piano or Organ	8	8	8	8
Intermediate Conducting				
114	2	2	2	2
Orchestration				
112	—	—	2	2
Elementary School Music Methods 109	3	3	—	3
Junior High/Middle School General Music				
105	—	2	—	2
Secondary Instruments or Voice				
Must include Voice Class 39 if Voice is principal performing area	1-3	1-3	4	2-4

Electives (may not include principal performing area)	3-5	1-3	1-5	3-5
Total	21 Cr.	21 Cr.	21 Cr.	25 Cr.
Total required for graduation	134 Cr.	134 Cr.	134 Cr.	138 Cr.

Master of Music

This program is intended for performers, music teachers in the public and parochial schools, studio teachers, church musicians and others who wish to continue their professional studies at the graduate level. An appropriate bachelor's degree in music is a prerequisite.

In addition to the admission procedures of the Graduate Division, students must pass an audition in their principal performing media and submit two letters of recommendation, addressed to the Music Department.

Students whose undergraduate degree is not the one specified as prerequisite to each of the programs may be required to take certain undergraduate courses; such courses do not apply to the M.M. degree.

For further information, consult the Graduate Division bulletin.

Master of Arts in Liberal Studies

Within this framework, the Music Department offers a concentration in the field of music. Guidelines and requirements may be found in the Graduate Division bulletin. Details of the music concentration are worked out in a conference between the student and the adviser.

CURRICULUM THEORY, HISTORY AND METHODS

1. Introduction to Music.

Cr. 3. A study of the basic forms and styles of musical art in Western civilization and in non-Western cultures.

9. Basic Musicianship.

3+1, Cr. 3. A practical course in which basic musicianship is developed through work at the keyboard, sight singing, dictation and guided listening. The course is usually taken concurrently with Music 13.

10. Basic Musicianship.

3+1, Cr. 3. A continuation of Music 9. Prerequisite: Music 9. Usually concurrent with Music 14.

- 11. Basic Musicianship.**
3+1, Cr. 3. A continuation of Music 10.
Prerequisite: Music 10. Usually concurrent with Music 63.
- 13. Music Theory.**
Cr. 3. A course in the fundamentals of music which includes the development of analytical and listening skills and deals with vocabulary, notation, melodic and harmonic organization, instrumentation, part writing and style analysis.
- 14. Music Theory.**
Cr. 3. A continuation of Music 13 including the study of modulation, chromatic harmony, simple form and analysis, American popular song and the musical language of the blues, boogie and jazz. Prerequisite: Music 13.
- 63. Music Theory.**
Cr. 3. A continuation of Music 14 with special emphasis on the harmonic developments of the Romantic period and the late 19th century. Prerequisite: Music 14.
- 64. Music Theory.**
Cr. 3. A course utilizing skills of analysis, creative writing and listening in the study of polyphony of the late Renaissance period, counterpoint of the 18th century, musical forms utilizing contrapuntal materials (fugue, invention), larger forms including variations, sonata-allegro, sonata-rondo and concerto, and an introduction to musical techniques of the 20th century. Prerequisite: Music 63.
- 105. Junior High/Middle School Instrumental and General Music Methods.**
Cr. 2. A course in materials, teaching techniques and methodologies for future teachers of general and instrumental music in the junior high and middle schools.
- 107. Music Methods for the Elementary Teacher.**
Cr. 3. A study of materials, methods and techniques of general classroom music for the primary grades. This course is open only to elementary education majors and may not be counted toward a major or minor in Music.
- 109. Elementary School Music Methods.**
Cr. 3. A study of materials, methods of procedure and supervision for primary grades. Field trips are required. This course may not be counted toward a major or a minor in Music. Prerequisite: Music 14.
- 110. Language Diction.**
Cr. 1. This course gives the student a practical knowledge of pronunciation used in singing the four principal languages of music literature: Italian (Latin), French, German and English.
- 111. Language Diction.**
Cr. 1. A continuation of Music 110. Prerequisite: Music 110.
- 112. Orchestration.**
Cr. 2. The technique of scoring for orchestra and band. Prerequisite: Music 14.
- 113. Basic Conducting.**
Cr. 2. An introduction to conducting including a study of score reading, beat patterns, acoustics and interpretive principles. Prerequisite: Music 14 or consent of the instructor.
- 114. Intermediate Conducting.**
Cr. 2. A continuation of Music 113. Includes rehearsal techniques, specific choral and instrumental conducting problems and ensemble conducting experience. Prerequisite: Music 113.
- 115 (215). Liturgical Organ Playing.**
Cr. 2. A practical course in playing hymns and chants, accompanying, realization of figured bass, score reading and improvising in small forms. The historic and current roles of the organ in the liturgy are discussed. Prerequisites: three years of organ study and Music 14, or permission of the instructor. Offered in alternate years.
- 117. History and Literature of Music I.**
Cr. 3. The development of musical thought and literature from the ancient world through the early Christian era, the Middle Ages and the Renaissance. Prerequisites: Music 10 and 63.
- 118. History and Literature of Music II.**
Cr. 3. The development of musical thought and literature from the Renaissance to the 19th century. Prerequisites: Music 10 and 63.
- 119. History and Literature of Music III.**
Cr. 3. A study of music and musical thought from the early 19th century to the present. Prerequisites: Music 10 and 14.
- 120. Music in History.**
Cr. 3. A study of music as a cultural expression in the history of Western civilization through the examination of the major stylistic traditions of musical art.
- 121 (221). Pro-Seminar in Music.**
Cr. 2-3. An intensive study of a limited area in the history or theory of music. This course may be repeated for credit. Prerequisite: consent of the Chair of the Department. Offered in alternate years.
- 123 (223). Pro-Seminar in the Pedagogy of Music.**
Cr. 2. A consideration of the problems of teaching basic musicianship at all levels. Special attention is given to the adaptation of basic principles to the media of most interest to the members of the pro-seminar. Prerequisite: consent of the Chair of the Department.
- 126 (226). Advanced Conducting, Instrumental.**
Cr. 2. A study of instrumental scores, conducting techniques and materials. Prerequisite: Music 114 or the equivalent.
- 127 (227). Advanced Conducting, Choral.**
Cr. 2. A course for school musicians and professional church musicians dealing with advanced problems in choral conducting. Prerequisite: Music 114 or the equivalent.
- 128 (228). Advanced Conducting, Choral.**
Cr. 2. A continuation of Music 127. Prerequisite: Music 127 or the equivalent.
- 132 (232). Workshop in Music Education.**
Cr. 1-2. A study of current topics in music education in summer workshop sessions of one or two weeks.
- 135 (235). Music Theory.**
Cr. 3. A study of music of the 20th century including analysis and creative writing.

Impressionism, free tonality, atonality, serialism, aleatoric music, and electronic music are investigated and systems of analysis developed by Hindemith and Forte are introduced. Music of Debussy, Hindemith, Stravinsky, Bartok, Schoenberg, and Webern is studied with particular attention given to musical technique and style.

136 (236). Music Theory.

Cr. 3. An intensive study of musical form, including contrapuntal forms, rondo, sonata-allegro, sonata-rondo and concerto and their historical evolution. Also included is a study of the analytical methods and teachings of Heinrich Schenker. Prerequisite: Music 64 or permission of the instructor.

171 (271). Hymnology.

Cr. 2. A study of the Christian hymn from its earliest sources to the present day. Prerequisites: junior standing and consent of the Chair of the Department. Offered in alternate years.

174 (274). History of Church Music.

Cr. 2. A study of the development of church music from the earliest history of the Church in the Old Testament to the present, with special emphasis on the period from Luther to Bach. Prerequisites: junior standing and consent of the Chair of the Department. Offered in alternate years.

175. Music Enterprises.

Cr. 3. The major objective of this course is acquaint the student with basic information for successful music merchandising and to understanding of the place of music in our contemporary society. Areas and principles to be covered include retailing, publishing, manufacturing, performing and recording and managing musical enterprises.

176. Internship.

Cr. 3. Controlled, on-the-job experience with participating businesses for senior music students. May be taken during the regular term with part-time employment of 18 to 20 hours hours weekly or during the summer session with 36 to 40 hours per week. Term project required. Applications should be made early in the semester preceding registration for this course. The application is reviewed on the basis of the student's academic standing, faculty recommendations, professional progress and demonstrated interest. May not be repeated for credit. S/U option may be elected. Prerequisite: Music 175.

191. High School Music Methods.

Cr. 2. (See Education 191.) Principles of planning, organizing and teaching the various kinds of music courses and activities in middle school/junior high and high school. Prerequisite: admission to Supervised Teaching.

194. Independent Study in Music.

Cr. 1-3. A course of study arranged by the student with the consent of and under the supervision of a faculty adviser. The study

results in a written essay on a topic approved by the adviser. Prerequisites: Music 64 and 118.

APPLIED MUSIC

Note: Non-music majors who are candidates for degrees in the College of Arts and Sciences are restricted to 16 credit hours toward graduation in applied music, of which no more than four credit hours may be in ensemble music.

A. Private Instruction.*

100. Cr. 1-3.

Open to all students of the University, including the Evening Division. Students in any medium should usually register for no more than two credit hours. Registration for three credit hours is available only to candidates for the Bachelor of Music degree in their principal applied music media. One credit hour provides one-half hour per week of private instruction and presumes at least three hours of practice per week for a period of one semester. Two credit hours provide one-half hour per week of private instruction and presume at least six hours of practice per week for a period of one semester. Three credit hours provide 45 minutes of private instruction per week and presume at least nine hours of practice per week. Private instruction is supplemented by repertoire classes in the various media that meet one 50-minute period per week.

Media:

<i>Voice</i>	<i>Classical Guitar</i>
<i>Piano and Jazz Piano</i>	<i>Flute</i>
<i>Harp</i>	<i>Oboe</i>
<i>Harpischord (by audition only)</i>	<i>Clarinet</i>
<i>Organ (by audition only)</i>	<i>Bassoon</i>
<i>Organ Improvisation (by audition only)</i>	<i>Saxophone</i>
<i>Violin</i>	<i>French Horn</i>
<i>Viola</i>	<i>Trumpet</i>
<i>Violoncello</i>	<i>Trombone</i>
<i>Contrabass</i>	<i>Baritone Horn</i>
	<i>Tuba</i>
	<i>Percussion</i>
	<i>Electronic Music</i>

Composition. A program of study dealing creatively with the problems of musical form. Prerequisites: consent of the instructor and consent of the Chair of the Department.

B. Class Instruction.

31. Stringed Instrument Class.

0+2, Cr. 1. Violin, viola, violoncello and contrabass are studied for the purpose of giving the student a fundamental playing and teaching knowledge of the instruments.

33. Woodwind Instrument Class.

0+2, Cr. 1. Clarinet, saxophone, oboe, bassoon and flute are studied for the purpose of giving the student a fundamental playing and teaching knowledge of the instruments.

*See page 185 for appropriate fees.

35. Brass Instrument Class.

0+2, Cr. 1. Trumpet, French horn, trombone, baritone horn and tuba are studied for the purpose of giving the student a fundamental playing and teaching knowledge of the instruments.

36. Guitar Class.

0+2, Cr. 1. Guitar is studied for the purpose of giving the student the basic playing skills necessary for the use of the guitar in classroom music teaching.

37. Percussion Instrument Class.

0+2, Cr. 1. Percussion instruments are studied for the purpose of giving the student a fundamental playing and teaching knowledge of the instruments.

39. Voice Class.

0+2, Cr. 1. This course is designed to give the student a fundamental technical and teaching knowledge of the voice as an instrument.

C. Instruction in Ensemble Music.

Instruction in one of the following ensembles for a period of one semester gives one credit hour. If a student has earned eight credit hours in ensemble music, any additional enrollments are graded on the S/U basis.

All ensemble courses are available for graduate credit on either the 200 or 300 level. Enrollment is

limited to students who have specialized training and background to participate in the ensemble in some capacity (such as assistant conductor, section leader or project director) to be determined by the instructor of the ensemble and with the approval of the Chair of the Department.

Note: Non-music majors may apply no more than four credit hours of ensemble music toward a degree in the College of Arts and Sciences.

150, 250, 350. Choirs.

Chapel Choir, Concert Choir, Kantorei, Treble Choir and VU Show Revue, admission by audition only. Also Choral Society, audition not required.

152, 252, 352. University Bands.

Symphonic Band, Jazz Band, admission by audition only. Marching Crusaders Band and University Band, audition not required.

154, 254, 354. University Symphony Orchestra.

Admission by audition only.

156, 256, 356. Opera Workshop.

Admission by audition only.

158, 258, 358. Chamber Music.

Collegium Musicum, Brass Ensemble, Percussion Ensemble, Jazz Workshop, Jazz Combo, accompanying or other assigned chamber ensemble. Admission by approval of the Chair of the Department.



Dickmeyer Hall

Philosophy

**Professors Klein, Riedel, Schnabel;
Associate Professor J. Smith (Chair).**

Courses in philosophy offer students the opportunity to examine the basic issues which arise in all fields of endeavor and also to explore the positions of the great thinkers of both Western and Eastern civilizations. These courses encourage students to reflect philosophically on those concepts which significantly shape human life because of the key role they play in language, thought and action. Such reflection is philosophical if it is analytical, critical, and evaluative. The study of philosophy tends to develop and sharpen analytical and critical thinking generally, not only with respect to philosophical topics, but with respect to other disciplines as well.

A major in Philosophy may lead to careers such as law, the ministry and teaching, and enhances careers in business, education, writing, and public service.

Major. A minimum of 27 credit hours in Philosophy constitutes a major. Courses must include Philosophy 3, 51, 53 and 127. The remaining courses should be selected in consultation with the Chair of the Department, taking into account one's total academic program and professional plans. The Department recommends specific plans of study for those preparing for entrance into law school, seminary or graduate study in philosophy. Majors who are preparing for graduate study in philosophy are advised to complete a minimum of 36 credit hours of philosophy. Recommended plans of study are available at the Departmental Office.

Minor. A minimum of 15 credit hours in philosophy constitutes a minor. Courses must include Philosophy 3, 51 and one of Philosophy 52, 53 and 54.

Degree. Completion of the degree requirements of the College of Arts and Sciences with a major in Philosophy leads to the Bachelor of Arts degree.

Approval of Schedules. All students taking a major or minor in Philosophy must have their schedules approved by the Chair of the Department at the beginning of each semester.

Prerequisites. Courses numbered under 100 are considered to be lower level courses and have no other course prerequisites. Courses numbered above 100 are considered to be upper level courses and have, as prerequisite, any one course numbered under 100, or Philosophy 101 taken in Christ College, or consent of the Chair of the Department. The Department suggests that students wishing to satisfy the Historical and Philosophical Studies component of the general education requirements would be best served by taking Philosophy 1, 2 or 3; majors and others planning to take 100-level courses should take Philosophy 3 and at least one of the History of Philosophy courses (51, 52, 53, 54) before taking upper level courses.

Note: Students should consult the Philosophy Department Course Selection Bulletin published by the Department each semester or the Schedule of Classes to ascertain when any particular course will be offered. The bulletin gives a detailed description of each course offered the following semester. Copies are available at the departmental office and at every registration.

1. Introduction to Philosophy: Social Philosophy.

Cr. 3. A philosophical introduction to moral issues of the sort that we must make decisions about both as individuals and as citizens: reverse discrimination, capital punishment, abortion, euthanasia, nuclear warfare and deterrence, and others. The course emphasizes the problems of arriving at decisions on these issues that are both consistent with one's own moral convictions and based on reasons that are applicable to the conventions, norms and laws of our pluralistic society. The course is decision-oriented.

2. Introduction to Philosophy: Fundamental Questions.

Cr. 3. An introduction to philosophy which features some of the most fundamental questions raised by both ordinary persons and philosophers in their attempts to understand nature, persons and religion. Questions are raised about the nature of reality, the foundations of knowledge and value, the nature of persons, freedom and causality, and the relationship between faith and reason. The course is problem-oriented.

3. Introduction to Philosophy: Logic.

Cr. 3. An introduction to contemporary formal logic. Truth-functional logic and elementary quantification theory are the primary topics; the traditional logic of the syllogism is studied as a

part of the latter. Particular emphasis is given to the application of formal techniques to the analysis and evaluation of arguments in everyday settings. The course is argument and language oriented.

51. History of Ancient Philosophy.

Cr. 3. An approach to the philosophies of ancient Greece and Rome which emphasizes their systematic character and their current relevance. Primary documents are read throughout.

52. History of Medieval Philosophy.

Cr. 3. A tracing of basic themes in the great philosophies of the Western world from Plotinus to William of Ockham. Primary documents are read throughout.

53. History of Early-Modern Philosophy.

Cr. 3. An introduction to the basic philosophic themes from Hobbes to Hume. The major figures are Descartes, Leibnitz, Spinoza, Locke, Berkeley and Hume. Primary documents are read throughout.

54. History of Modern Philosophy.

Cr. 3. A study of one or more of the major figures or philosophical traditions in the 18th, 19th and 20th centuries, beginning with Kant. Topics vary from semester to semester; they are announced before mid-semester registration. Included are studies such as Kant and His Interpreters, German and British Idealism, Positivism, The Analytic Tradition, American Philosophy or Phenomenology. This course may be repeated for credit if the topics are different.

55. Non-Western Philosophy.

Cr. 3. An introduction to some themes in the great philosophies of the non-Western world. A major part of the semester is devoted to the analysis of important documents.

75. Political Philosophy.

(Also offered as Political Science 50.) Cr. 3. A survey of the major formulations and problems of Western political thought as developed by political philosophers from the Greeks through the modern era. (May not be taken by students who have had Political Science 50.) Prerequisites: sophomore standing.

90. Philosophy of Science.

Cr. 3. A philosophical approach to the language, practices and goals of the physical sciences. Special attention is given to the concepts, methods and theories of the physical and biological sciences, leading toward an interpretation of science.

Note: See the paragraph on prerequisites above before enrolling in any of the following courses.

112. Philosophy of Religion.

Cr. 3. A philosophical analysis of some of the beliefs, concepts and problems involved in one or more of the major religious traditions.

121. Metaphysics.

Cr. 3. An examination of traditional and contemporary metaphysical topics, such as ontology, appearance and reality, persons, the mind-body problem, the analytic-synthetic distinction, the private language problem.

123. Ethics.

Cr. 3. A study of some of the most significant and influential ethical theories of the modern era. Emphasis is on fundamental theoretical issues concerning the nature of moral discourse and practice: the existence of objective moral values, the possibility of moral knowledge, the place of reason in ethical disagreements, and the role of convention or agreement in moral practice.

127. Theory of Knowledge.

Cr. 3. An examination of selected topics which illustrate dominant themes of traditional and contemporary theories of knowledge, such as skepticism, perception, evidence, verifiability, memory, belief, justification, and truth.

129. Symbolic Logic.

Cr. 3. A study of quantification theory, including the concepts of proof, consistency and completeness and topics in logical theory. Prerequisite: Philosophy 3 or its equivalent.

144. Existentialism.

Cr. 3. An examination of some of the major works of 19th and 20th century existentialists and their approach to philosophical problems.

146. Analytic Philosophy.

Cr. 3. An examination of some of the major works of contemporary British and American analytic philosophers and their approach to philosophical questions. Austin, Wisdom and Wittgenstein are sometimes emphasized.

190. Philosophical Topics.

Cr. 3. An examination of the works of one major philosopher, such as Kant or Wittgenstein; or of a single philosophical problem area such as scientific explanation, behaviorism or free action; or of a single philosophical approach such as Positivism, Pragmatism or Phenomenology. This course may be repeated for credit if the topics are different.

193. Independent Projects.

Cr. 1-3. A student may undertake independent study of some person, problem, theme, etc., under the supervision of some member of the Philosophy Department. The student will propose a topic, generate a bibliography and specify the scope and goals of the study.

197. Honors Work in Philosophy.

Cr. 3. See Honors Work, page 38.

198. Honors Candidacy in Philosophy.

Cr. 3. See Honors Work page 38.

Physical Education

Professors Koenig, Steinbrecher;
Associate Professors Amundsen,
Koch; Assistant Professor Bretting
(Chair); Instructors Lissner, Pringle,
Wiziecki; Part-Time Assistant
Professor T. Smith; Part-Time
Instructors Criswell, Ferchen, Moore,
Pawlik, Seibert.

The Physical Education Department seeks to provide students with knowledge and skills designed to enhance the quality of campus life as well as to provide them with suitable basic experiences for life-long personal use.

Although physical education within a school setting is a continuing area of professional opportunity, personal physical activity and enjoyment of spectator sports has created new areas of opportunity for the physical educator: adult fitness, leisure services, athletic training, sports writing and broadcasting, sports management, clothing and equipment design and sales. Students can select courses from the departmental curriculum to reflect these new areas.

Major. A minimum of 28 credit hours in Physical Education constitutes a major. Courses must include Physical Education 51, 90, 110, 134, 140, 144, 162, 182 and 184. In addition, students must complete Biology 51 and 52, Chemistry 43, Home Economics 7 and Psychology 51.

Minor. A minimum of 18 credit hours in Physical Education constitutes a minor. Courses must include Physical Education 51, 90, 110 and 182.

Athletic Training Concentration. A minimum of 38 credit hours in physical education and athletic training is required. Courses must include Physical Education 51, 90, 98 (3 credit hours), 110, 128, 134, 144, 160, 170, 182, 184, 187, 188, 189 and 190 (3 credit hours). In addition, students must complete Biology 51 and 52, Chemistry 43, Home Economics 7, Psychology 51 and 140, and Communication 45. Completion of this concentration plus 1000 hours of athletic training experience should qualify a

student to take the NATA Certification Examination.

Teaching Programs. Students who plan to teach physical education in elementary or secondary schools with a major or minor in Physical Education should consult the Chair of the Department and the Education Department for specific requirements.

Degree. Completion of the degree requirements of the College of Arts and Sciences with a major in Physical Education leads to the Bachelor of Science in Physical Education degree. The Athletic Training concentration is noted on a student's transcript, Physical Education: Athletic Training.

Sports Management. Students interested in pursuing careers in the field of sports management may prepare themselves through an individualized major emphasizing courses in Physical Education, Communication, and Business. Interested students should consult with the Chair of the Department of Physical Education.

Approval of Schedules. All students pursuing a major or minor in the Department, and all students who plan to achieve certification in the teaching of Physical Education must have their schedules approved by the Chair of the Department or a departmental adviser before each registration period.

Basic Courses in Physical Education.* No more than four credit hours earned in Physical Education 1-49 may be counted toward any degree.

All students must take one credit hour of Fitness Principles and Activities courses 1-5. Each section meets twice a week for fourteen weeks.

1. Individual Exercise.

0+2, Cr. 1. Principles and physiology of physical fitness with topics such as resistive exercise training, nutrition and aerobic conditioning. A personalized exercise program is developed.

2. Aerobic Dance.

0+2, Cr. 1. Principles and physiology of physical fitness is included in conjunction with the physical activities involved in an aerobic dance program.

*Anyone who has served in the Armed Forces for at least one year is exempted from this requirement, except a National Guard member.

3. Aerobic Run.

0+2, Cr. 1. Principles and physiology of physical fitness is included in conjunction with the physical activities involved in an aerobic run program.

4. Aerobic Swim.

0+2, Cr. 1. Principles and physiology of physical fitness is included in conjunction with the physical activities involved in an aerobic swim program.

5. Weight Training.

0+2, Cr. 1. Principles and physiology of physical fitness is included in conjunction with the physical activities involved in a weight training program.

6-49. Elective Activities.

0+1, Cr. 0.5. Individual, dual, team, indoor and outdoor activities are presented in various combinations. A specific activity may not be repeated for credit. These courses may be taken S/U. Each course meets twice a week for seven weeks.

51. Introduction to Physical Education.

Cr. 1. Seven weeks course. An introductory course for students interested in physical education. The course provides an opportunity for students to explore physical education as a field of study.

54. Dance Patterns and Forms.

2+2, Cr. 3. A study of dance with emphasis on modern, folk, social and square dance forms as well as teaching techniques.

68. Gymnastics.

1+2, Cr. 2. This course consists of methods and teaching cues of apparatus and tumbling techniques. May meet three times a week.

71. Advanced Lifesaving/Lifeguarding.

1+1, Cr. 1 or 1+2, Cr. 2. Analysis and practice of skills in swimming and lifesaving which lead to an American Red Cross Advanced Lifesaving Certificate (1 Cr.). Analysis and practice of skills in swimming, lifesaving and lifeguarding which lead to an American Red Cross Lifeguarding Certificate (2 Cr.: Mini or Summer Session only). Prerequisite: Intermediate Swim, instructor's approval.

72. Water Safety Instruction.

1+2, Cr. 2. A study of the techniques for teaching swimming and lifesaving. This course leads to an American Red Cross Water Safety Instructor's Certificate. Additional hours may be announced. Prerequisite: Physical Education 71.

86. The Learning Potentialities of the Out-of-Doors.

1+2, Cr. 2. Seven weeks course. An experience of learning opportunities as provided by camping and outdoor education, including outdoor elementary educational activities. Field trips are required as part of the laboratory experience.

88. Officiating in Sports.

Cr. 1. May be offered as a seven weeks course. A study of the general principles and techniques involved in officiating interscholastic sports. May lead to state certification when

appropriate. Because the course is divided into one-credit sections each dealing with a specific sport, no section may be repeated for credit.

90. First Aid, Health and Safety.

(Also offered as Home Economics 90.) Cr. 2. Seven weeks course. A study of the prevention and emergency care of sudden illness and injury, which leads to Standard American Red Cross Certification.

98. Coaching Theory.

Cr. 1-2. Seven weeks course. A study of the methods and principles of coaching interscholastic and intercollegiate sports. Because the course is divided into sections, each dealing with a specific sport, no section may be repeated for credit.

110. Seminar in Health.

Cr. 3. A study of the human body in health and disease. Included are discussions of major American health concerns, their incidence and prevention.

128. Psychology of Sport.

Cr. 3. A study of the competitive sports experience, with emphasis on the multi-dimensional factors involved in the psychology of sport.

134. Prevention and Care of Athletic Injuries.

2+2, Cr. 3. An investigation of principles pertaining to the prevention and care of athletic injuries. Prerequisite: approval of the instructor.

140. Methods of Physical Education.

1+2, Cr. 2. Analysis and application of teaching techniques and organizational methods for the instruction of physical education, with emphasis on indoor/outdoor activities and team/individual sports. Meets three times a week.

144. Measurement and Evaluation in Physical Education.

Cr. 3. An analysis of evaluation techniques for activities and an investigation of the measure of central tendency, statistical designs, computer use and empirical research for physical education.

148. Special Topics in Recreation and Leisure Studies.

Cr. 1-3. An open topic course which may investigate various topics pertaining to recreational and leisure programs (e.g., organization of intramural programs, adult fitness, outdoor recreation program management, pool management, SCUBA).

160. Adapted Physical Education.

Cr. 3. A study of the needs and problems of the exceptional individual with emphasis on adapting appropriate activities to meet these needs.

162. Philosophical, Historical and Organizational Perspectives in Physical Education.

Cr. 3. A study of the philosophical, historical, organizational and administrative aspects of physical education.

164. Sport and Society.

Cr. 3. A study of the role of sports in society and the effects of culture and society on sports.

170. Movement and Learning.

2+2, Cr. 3. A study of the place of movement in the life of the child and the ways in which various types of activity can affect the development of the child.

180. Independent Group Study.

Cr. 1-3. A personal investigation of a research-oriented concern pertaining to physical education. This course may be repeated for a maximum of six credit hours. Prerequisite: approval of the instructor and consent of the Chair of the Department.

182. Kinesiology.

2+2, Cr. 3. A study and application of the kinesiological and biomechanical principles of movement.

184. Physiology of Exercise.

2+2, Cr. 3. An investigation of the physiological response of the human body to exercise and training, with laboratory experience. Prerequisite: Biology 52.

185. Special Topics in Physical Education.

Cr. 1-3. An open-topic course which examines a variety of topics pertaining to the needs of the physical educator, e.g., motor learning, sports management, curriculum construction, advanced athletic conditioning, current issues in physical education.

187. Advanced Athletic Training.

Cr. 2. An investigation and application of advanced training, emphasizing the prevention and rehabilitation of athletic injuries. Prerequisite: Physical Education 134.

188. Practicum in Athletic Training.

1+1, Cr. 1. The practical application of techniques used in dealing with injuries.

Prerequisite: Physical Education 134. (May be repeated for credit; prerequisite: Physical Education 187.)

189. Athletic Training Modalities.

1+1, Cr. 1. The study and application of the use of heat, cold, electricity and selected rehabilitation modalities.

190. Internship in Physical Education or Athletics.

Cr. 1-3. An opportunity for students to gain practical experience under careful supervision by working in university programs or offices, public agencies or businesses, sport clubs, community or adult fitness programs, high schools, media and communications, programs for the elderly, athletic administration, intramural and facility management or other appropriate work experiences. Objectives, evaluations and procedures for the conduct of the course are jointly planned by the student, the Chair of the Department and the program supervisor. This course may be repeated for a maximum of six credit hours. Prerequisites: junior standing, approval of the instructor and consent of the Chair of the Department.

191. The Teaching of Physical Education.

Cr. 2. (See Education 191.) A study of the methods of teaching physical education in the elementary and secondary schools. This course may not be counted towards a major or minor in Physical Education. Prerequisite: admission to Supervised Teaching.



Athletics-Recreation Center

Physics

Professors Koetke (Chair), Naumann; Associate Professor Manweiler; Assistant Professors Fisk, Hrivnak.

Physics is the study of natural phenomena in an attempt to explain the interactions of matter and energy in terms of a limited number of fundamental laws. This study is predicated on careful observation and experimentation, thoughtful analysis and creative insights. It is both descriptive and predictive and encompasses a realm from the submicroscopic particles of the atomic nucleus to the distant constituents of the universe.

In this context, the Physics Department offers a program of study to prepare students for graduate study in Physics or for immediate employment after graduation. Those students preparing for other professional careers in engineering, secondary education, law, medicine, mathematics, computer science or business may find an undergraduate major or minor in Physics to be supportive and a sound intellectual preparation. The Physics program emphasizes both the fundamental physical laws of nature and the application of such laws to challenging problems confronting society today. Physics students pursue research projects under the direction of members of the physics faculty in such diverse subjects as nuclear and reactor physics, solar energy, astronomy and astrophysics.

The Department is well equipped, having a subcritical nuclear reactor, 300 KeV accelerator, planetarium and astronomical observatory, and extensive computer support.

The Department sponsors a local chapter of the national Society of Physics Students. Qualified students are elected to membership in the national honor society, Sigma Pi Sigma.

Qualified students may obtain cooperative education experiences in a variety of employment situations, including research laboratories and industrial and engineering companies. Up to four credits may be counted towards the minimum 28 credit hours needed for a physics major. With departmental approval, Physics 191, 192, 193 or 197 may be substituted for Physics 195. (For further information, refer

to Cooperative Education, College of Arts and Sciences, page 39.)

Major. A minimum of 28 credit hours in Physics (32 credits for a Bachelor of Science degree) constitutes a major. Courses must include Physics 79, 95, 96 (or approved ECE substitute), 102, 125, 126, 127, 151, 190 and 195.

One year of chemistry is strongly recommended. Students preparing for graduate work should also take Physics 130, 152, 181, 183, 184, and 187 and Mathematics 184. It is assumed that students majoring in Physics will acquire competency in computer programming (FORTRAN). Courses in astronomy may be taken as electives.

Minor. A minimum of 16 credit hours in Physics constitutes a minor. Physics 79 and 125 must be included.

Degrees. Completion of the degree requirements of the College of Arts and Sciences with a major in Physics leads to the Bachelor of Arts degree or the Bachelor of Science degree.

Approval of Schedules. All students taking a major or minor in Physics and all students planning to teach Physics must have their schedules approved by the physics adviser or Chair of the Department.

ASTRONOMY

1. Astronomy.

3+3, Cr. 4. A study of the history of man's view of the universe including our contemporary understanding of the physical universe. The tools and techniques employed by contemporary astronomers to probe the universe are studied. Topics include the structure of the solar system as revealed by modern space probes, the sun, stellar systems and classification, and the structure and evolution of stars, galaxies and the universe. Special topics such as neutron stars, black holes and the big bang model may also be examined. Weekly laboratories are designed to give students personal experience with basic astronomical equipment and analysis of astronomical data. Only elementary mathematics is required. This course may be used to fulfill the natural science component of the general education requirements.

3. Astronomy I.

Cr. 2. This and Astronomy 4 compose a two-course sequence equivalent to Astronomy 1.

4. Astronomy II.

Cr. 2. Continuation of Astronomy 3, together with which this course composes a two-course sequence equivalent to Astronomy 1.

11. Observational Astronomy.

0+3, Cr. 1. Practical observational experience using the 12.5 inch reflecting telescope and

other instrumentation. Prerequisites: Astronomy 1 or -3 and 4-, or consent of the instructor.

100. Topics in Astronomy.

Cr. 1-4. The study of various topics of current interest in astronomy and astrophysics. Prerequisites are dependent on the topic. Interested students are urged to consult the instructor or the Department Chair for specific information.

195. Special Problems in Astronomy.

Cr. 1-2. Each student undertakes a special research problem. A written report and an oral presentation at the Physics Colloquium are required. Student research problems must be approved by the Department. Prerequisite: consent of the Chair of the Department.

PHYSICS

47. Essentials of Physics.*

3+3, Cr. 4. The development of basic concepts of physics emphasizes intuition, logic and experiment rather than mathematical analysis. Specific topics included are space, time, motion, energy, conservation laws and heat. Not open to students who have taken Physics 77. This course may be used in fulfillment of the Natural Science component of the general education requirements.

48. Essentials of Physics.*

3+3, Cr. 4. This course is a continuation of Physics 47. Specific topics include the study of electricity and magnetism, wave phenomena, optics, atomic and nuclear physics. Not open to students who have taken Physics 78. Prerequisite: Physics 47 or consent of the instructor. This course may be used in fulfillment of the Natural Science component of the general education requirements.

69. Musical Acoustics.

3+2, Cr. 4. A study of the physical nature of sound waves, the production and measurement of sound and the physical and psychophysical basis of hearing and music. Although this course is of general interest, it is also suitable for music or other arts majors in fulfillment of the Natural Science component of the general education requirements.

77. Principles of Physics: Mechanics and Heat.*

3+3, Cr. 4. A study of classical mechanics, including static and dynamic systems, and of thermal physics for students of physics and chemistry and for students in pre-medical arts programs. The mathematical level of this course is primarily that of simple algebra, but relations between physics and calculus are discussed where appropriate, so that students should have taken a course in differential calculus or to be taking one concurrently. Not open to students who have taken Physics 47. This course may be used in fulfillment of the Natural Science component of the general education requirements.

78. Principles of Physics: Electricity, Magnetism and Waves.*

3+3, Cr. 4. A continuation of Physics 77 which treats electricity, magnetism, wave motion and

optics. Prerequisite: Physics 77 or advanced placement by permission of the Chair of the Department. Not open to students who have taken Physics 48. This course may be used in fulfillment of the Natural Science component of the general education requirements.

79. Principles of Physics: Atoms and Nuclei.

Cr. 3. An introduction to the special theory of relativity, physics of the atom, Schrodinger wave mechanics, physics of condensed matter, physics of the nucleus including radioactivity, and elementary particles. Prerequisites: Physics 78 and Mathematics 76 (may be taken concurrently).

95. Electricity and Electronics.

Cr. 2. This course emphasizes the study of alternating current circuits and solid state electronic devices including transistors and integrated circuits. With the permission of the Chair of the Department of the physics adviser, this lecture course requirement may also be satisfied by completing ECE 96 (3+3, Cr. 4) or ECE 85 (Cr. 3) or ECE 89 (Cr. 3). Prerequisite: Physics 78 or equivalent.

96. Electricity and Electronic Laboratory.

0+3, Cr. 1. This laboratory course is to be taken concurrently with Physics 95. With the permission of the Chair of the Department or the physics adviser, this laboratory course requirement may also be satisfied by completing ECE 81 or the laboratory part of ECE 96.

100. Topics in Physics.

Cr. 1-4. A study of various topics of current interest in physics. Prerequisites are dependent upon the topic. Interested students are urged to contact the instructor or Chair of the Department for specific information.

102. Analytical Mechanics.

Cr. 3. The classical mechanics of particles, systems of particles and rigid bodies, utilizing analytical techniques of vectors and differential and integral calculus. Among the topics included are Newton's laws of motion in one and three dimensions, conservation laws, harmonic oscillation, central force motion, scattering and an introduction to rigid body motion. Prerequisites: Physics 78 and Mathematics 73 or 77 (may be taken concurrently).

125. Experimental Physics I.

0+3, Cr. 1. Selected experiments include both the measurement of fundamental constants such as the speed of light, Planck's constant, the gravitational coupling constant, as well as investigations of fundamental physical processes and techniques such as black body radiation, radioactive decay, and x-ray diffraction. The development of laboratory skills and methods of data analysis are emphasized, using advanced computer analysis and data acquisition techniques. Normally offered in fall semesters.

126. Data Reduction and Error Analysis.

Cr. 1. The study and application of various techniques employed in the reduction and analysis of laboratory data to include probability distributions, regressions, tests of goodness of fit, data smoothing and the methods for determining the errors on measured and fitted parameters. Extensive use of the computer is

*Credit for Physics 47, 48, 77, or 78 may be earned through the Advanced Placement examinations offered by the College Entrance Examination Board.

expected. Students are required to program in BASIC and FORTRAN. Prerequisites: Physics 125 and Mathematics 77.

127. Experimental Physics II.

0+3, Cr. 1. Experiments in radiation detection and analysis using modern modular electronics. Prerequisites: Physics 79 and 125 and Mathematics 73 or 77.

130. Thermal Physics.

Cr. 3. A study of the basic principles of thermodynamics, kinetic theory and elementary statistical mechanics. Among the topics included are equations of state, laws of thermodynamics, reversibility, entropy, kinetic theory, transport phenomena and statistical description of systems of particles. Normally offered in the spring semester of even numbered years. Prerequisite: Physics 79.

151. Electromagnetic Fields.

Cr. 3. A study of electric and magnetic fields, their sources and interactions in vacuum and in dielectric and magnetic media. Prerequisites: Physics 102 and Mathematics 104 or 107 or permission of the physics adviser or the Chair of the Department.

152. Electromagnetic Waves and Physical Optics.

Cr. 3. Proceeding from Maxwell's equations, students investigate the wave aspects of electromagnetic fields including propagation, reflection, refraction, polarization, interference and diffraction. Other topics may include lasers, holography, radiating systems, wave guides, thermal radiation and optical spectra. Normally offered in the spring semester of odd numbered years. Prerequisite: Physics 151.

181. Nuclear and Reactor Physics.

3+3, Cr. 4. Nuclear and reactor physics for students with physics or engineering backgrounds. Topics include nuclear models, nuclear reactions, radioactivity, fission, neutron diffusion, neutron moderation, homogeneous thermal reactors, heterogeneous thermal reactors and an introduction to neutron transport theory. Laboratory work includes the study of nuclear reactions using the 300 keV particle accelerator, fundamental particle properties, neutron diffusion and slowing down properties, subcritical reactor studies and pulsed neutron methods using the subcritical light water reactor and neutron generator. Prerequisite: Physics 127.

183. Quantum Mechanics I.

Cr. 3. The fundamental concepts and principles of quantum physics are developed in a mathematically rigorous way and applied to atomic, nuclear and solid state physics. Topics include the fundamental postulates of quantum mechanics, the Schrodinger equation, and selected topics such as the harmonic oscillator, orbital and spin angular momentum, the hydrogen atom, identical particles, elementary matrix mechanics, multi-electron atoms, and

collision theory. Normally offered in the fall semester of odd numbered years. Prerequisites: Physics 79 and Mathematics 107 (both of which may be taken concurrently), or permission of the instructor.

184. Quantum Mechanics II.

Cr. 3. A continuation of Physics 183, with further development and application of quantum theory. Topics may include time independent and time dependent perturbation theory with applications, scattering theory, matrix mechanics, multi-electron and molecular systems, elementary Hartree-Fock theory, superconductivity, and elementary relativistic quantum mechanics. Offered upon sufficient demand in the spring semester of even numbered years. Prerequisite: Physics 183 or the permission of the instructor.

187. Theoretical Physics.

Cr. 3. The application of advanced mathematical methods to physical problems. Topics may include Lagrange's method, small oscillation theory including coupled oscillators, generalized rotation, the theory of special relativity, numerical methods, perturbation theory and group theory. Normally offered in the fall semester of even numbered years. Prerequisites: Physics 102 and Mathematics 107 (may be taken concurrently).

190. Physics Colloquium.

Cr. 0. All physics majors are expected to register for this course.

191. The Teaching of Natural Sciences.

Cr. 2. (See Education 191.) A study of the methods of teaching natural sciences in the secondary schools. This course may not be counted toward a major or a minor in Physics. Prerequisite: admission to Supervised Teaching.

192. Cooperative Education in Physics I.

Cr. 0.5-3. Experience in basic or applied physics with a cooperating employer. Mid-term and final written reports required. Prerequisites: Physics 125 and approval of the Chair of the Department. S/U grade.

193-194. Cooperative Education in Physics II-III.

Cr. 0.5-3. Continuation of Physics 192. Mid-term and final written reports required. Prerequisites: Physics 192 and approval of the Chair of the Department. S/U grade. May be repeated beyond 194 for additional credit.

195. Special Problems in Physics.

Cr. 1-2. Each student undertakes a special research problem. A written report and an oral presentation at the Physics Colloquium are required. Student research problems must be approved by the Department. Prerequisite: consent of the Chair of the Department or physics adviser.

197. Honors Work in Physics.

Cr. 3. See Honors Work, page 38.

198. Honors Candidacy in Physics.

Cr. 3. See Honors Work, page 38.

Political Science

Professors Balkema, Trost (Chair); Associate Professors Baas, Combs, Nuechterlein.

This Department offers courses which provide the student with an understanding of the basic concepts, methods of study and traditions of politics. In consultation with the Chair, the student may wish to concentrate in areas within the discipline such as executive processes, judicial behavior, comparative politics and the like.

A major in Political Science may lead to such careers as law, government service, politics and policy analysis.

Student excellence is recognized through membership in Pi Sigma Alpha, a national political science honorary organization. The Beta Nu Chapter of Pi Sigma Alpha was installed in 1953.

Major. A minimum of 30 credit hours in Political Science constitutes a major. Courses must include Political Science 40, 41, [44 or 65], 50, and 196.

Minor. A minimum of 18 credit hours in Political Science constitutes a minor. Political Science 40, 41 and [44 or 65] must be included.

Degree. Completion of the degree requirements of the College of Arts and Sciences with a major in Political Science leads to the degree Bachelor of Arts.

Approval of Schedules. Students taking a major or minor in Political Science must have their schedules approved by the appropriate adviser at the beginning of each semester.

Special Programs. For information concerning the Washington Semester see page 13. For information concerning the Semester on the United Nations see page 13.

1. Introduction to Politics.

Cr. 3. Designed as a general education course in social analysis, an introduction to the theories, concepts and issues of politics with applications to the American political system. Available for the Social Analysis component of the general education requirements.

10. The Field of Law.

Cr. 1. A course designed to help students prepare for the professional study of law. Open to all students. This course may not be counted toward a major or minor in Political Science.

40. The Government of the United States.*

Cr. 3. An introduction to the American national government, with special emphasis on the basic structure, functions and policies of the system. Available for the Social Analysis component of the general education requirements.

41. State and Local Politics in the United States.

Cr. 3. Comparative analysis of state and local political systems in the United States. Emphasis is placed on the contemporary role of states and localities in the development and implementation of public policies. Available for the Social Analysis component of the general education requirements.

44. Comparative Politics.

Cr. 3. Comparative study of Western and non-Western political systems. Includes examination of conceptual frameworks for comparative analysis. Available for the Social Analysis component or the Non-Western/Third World component of the general education requirements.

Note: The following courses are not open to freshmen.

50. Political Philosophy.

(Also offered as Philosophy 75). A survey of the major formulations and problems of Western political thought as developed by political philosophers from the Greeks through the modern era. (May not be taken by students who have had Political Science 53 or 54.)

60. Strategies of Inquiry.

Cr. 3. An examination of the philosophy, methods and techniques of political inquiry. Recommended to be taken in the sophomore year.

61. Political Behavior.

Cr. 3. An exploration of the sources and consequences of individual and group political behavior. The course will include an extensive consideration of the methods necessary to examine political behavior, including computer-aided analysis of survey data.

65. International Relations.

Cr. 3. The fundamentals of international politics and international organization, particularly the United Nations and its specialized agencies.

153. Politics of Industrialized States.

Cr. 3. A study of political systems in the Western industrialized world. Attention is directed primarily at Western and Eastern Europe, alternately. Prerequisite: Political Science 44 or consent of the Chair of the Department.

154. Politics of Developing States.

Cr. 3. A study of the governments and political problems of selected newly independent, under-developed states. Areas given in a semester vary across Africa, Latin America, the Middle

*Credit for Political Science 40 may be earned through the College Level Examination Program subject examination in American Government.

East and the Far East. Prerequisite: Political Science 44 or consent of the Chair of the Department.

155. Problems in State and Local Politics.

Cr. 3. A study in depth of important contemporary problems on the state or municipal level in the United States. Prerequisite: Political Science 41 or consent of the instructor.

156. Problems in American Politics.

Cr. 3. An intensive study of topics in the process, policies and functions of the American political system (e.g., political parties). Prerequisite: Political Science 40 or consent of the Chair of the Department.

157. Problems in International Relations.

Cr. 3. An intensive study of topics in international relations (e.g., international organizations). Prerequisite: Political Science 65 or consent of the Chair of the Department.

158. Problems in Political Philosophy.

Cr. 3. The study of one or more specific problems or philosophers in modern political philosophy. Prerequisites: Political Science 50 or consent of the instructor.

159. Problems in the Judicial Process.

Cr. 3. An examination of law and courts as part of the political process with specific emphasis on factors which influence judicial decisions and the impact of court decisions. Prerequisite: Political Science 40 or consent of the Chair of the Department.

160. Constitutional Law I.

Cr. 3. An analysis of Supreme Court decisions relating to judicial review, the power of national and state governments, federalism, the separation of powers, Presidential and Congressional power and related topics. Prerequisite: Political Science 40 or consent of the instructor.

161. Constitutional Law II.

Cr.3. A continuation of Political Science 160 focusing on Supreme Court decisions relating to the Bill of Rights, equal protection, due process and related topics. Prerequisite: Political Science 40 or consent of the instructor. Political Science 160 is not required.

162. Public Administration.

Cr. 3. An introduction to the basic principles of administrative organization and management in government. Prerequisites: Political Science 40 and junior standing.

163. Public Policy.

Cr. 3. An introduction to the study of the public policy processes, focusing on the politics and

science of policy formulation, execution and evaluation.

164. The Presidency.

Cr. 3. An examination of the American Presidency with specific emphasis on the President's constitutional position, the process of nominating and electing a President, Presidential power and behavior, and the President's relations with the public and coordinate branches of government. Prerequisites: Political Science 40 or consent of the Chair of the Department.

165. Congress.

Cr. 3. A study of the legislative processes in which emphasis is placed on the Congress of the United States and its policy-determining and directing roles. Prerequisite: Political Science 40 or the consent of the Chair of the Department. (This course normally includes a field trip.)

175. Seminar in Political Science.

Cr. 2-3. These are full or half semester courses covering a variety of subject areas, with subtitles and content dependent on instructor choice and student interest. They are of two types, labelled accordingly: (a) reading and discussion seminars or (b) seminars with major papers.

191. The Teaching of Social Studies.

Cr. 2. (See Education 191.) A study in the methods of teaching social studies in secondary schools. Prerequisite: admission to Supervised Teaching. This course may not be counted toward a major or minor in Political Science.

195. Independent Study in Political Science.

Cr. 1-3. Individual research on a specific problem in one of the fields of government under the supervision of a member of the departmental staff. A written report is required. Prerequisites: major with junior or senior standing and consent of the Chair of the Department.

196. Research Seminar in Political Science.

Cr. 3. A topical seminar in a selected area of political science, in which students are required to do guided research within the topic area. Designed for majors but open to other students.

197. Honors Work in Political Science.

Cr. 3. See Honors Work, page 38.

198. Honors Candidacy in Political Science.

Cr. 3. See Honors Work, page 38.

Psychology

Professor F. Vance; Associate Professors Arkelin, Harris, Ikeda, Millar, Rowland (Chair); Assistant Professor Mooney; Instructor Esper.

Psychology is the scientific study of mental processes and behavior. The diversified interests of its faculty enable the Department to present a comprehensive view of the field. Courses in physiological, experimental, social, industrial, developmental and clinical-counseling psychology are offered. Opportunities for laboratory research in psychology and applications through field experiences are available.

A major in Psychology may lead to careers in such fields as psychological counseling, recreational therapy, employment counseling, rehabilitation therapy, test consulting, demography, personnel managing, marketing, behavior therapy, psychological research and teaching.

Major. A minimum of 27 credit hours in Psychology constitutes a major for the Bachelor of Arts degree. Courses must include Psychology [51 or 52] and 100. In addition, a minimum of seven credit hours must be taken in the 130-139 experimental psychology courses, one of which must be taken with a laboratory; a minimum of three credit hours must be taken in the 140-149 developmental psychology courses, and a minimum of three credit hours must be taken in the 150-159 clinical-counseling psychology courses. A minimum of 32 credit hours constitutes a major for the Bachelor of Science degree. Psychology 51 or 52 must be taken, along with all the courses 100 or above as noted above for the Bachelor of Arts. Special topic courses may be used to fulfill some of these requirements for either degree with the consent of the Chair of the Department.

Minor. A minimum of five courses with a total of at least 15 credit hours in Psychology constitutes a minor. Courses for the minor must include Psychology [51 or 52], 100 and any course 130-139 with or without a laboratory.

Approval of Schedules. All students taking a major or minor in Psychology must have their schedules approved by

the Chair of the Department or their assigned departmental adviser.

51. General Psychology.*

Cr. 3. An introduction to the general field of psychology with special emphasis upon the scientific study of behavior. Not open to students who have taken Psychology 52.

52. General Experimental Psychology.

3+2, Cr. 4. An introduction to the general field of psychology with an emphasis on experimental procedures and data analysis techniques. Students have the opportunity to study psychological phenomena directly through various laboratory experiments. For natural science credit only. Not open to students who have taken Psychology 51.

Note: Psychology 51 or 52 is a prerequisite for all of the following courses.

53. Abnormal Psychology.

Cr. 3. An analysis of psychopathology within the framework of theory and research.

54. Social Psychology.

(Also offered as Sociology 54.) Cr. 3. An interdisciplinary approach to the study of social influences on the psychological functioning and behavior of the individual.

55. Industrial and Organizational Psychology.

Cr. 3. This course deals with applications of psychological principles, techniques and theories to the work environment. Special emphasis is placed on the issues of leadership, motivation, communication and group problem solving.

56. Psychology of Personality.

Cr. 3. An introduction to various theories of personality, with emphasis on their implications for current psychological applications and research.

100. Statistical Methods.

Cr. 3. An introduction to the fundamentals of descriptive and inferential statistics for the behavioral sciences.

120. Human Cognition.

Cr. 3. The study of various aspects of human learning, memory, and thought, such as perception, attention, development of expertise, problem-solving, reasoning, and language.

EXPERIMENTAL PSYCHOLOGY

Note: Experimental psychology courses fulfill a part of the natural science requirement when taken with a laboratory.

130. Environmental Psychology.

Cr. 3. The study of interrelationships between the physical environment and human behavior. Topics include environmental perception, psychological effects of air and noise pollution, personal space, crowding, urbanization, architectural design, and energy consumption. Prerequisite: Psychology 100 or consent of the instructor.

*Credit for Psychology 51 may be earned through the College Level Examination Program subject examination in General Psychology.

131. Laboratory in Environmental Psychology.
0+3, Cr. 1. Laboratory to be taken in conjunction with 130.

132. Physiological Psychology.
Cr. 3. A study of the structure and function of the nervous system in relation to motivation, emotion and cognitive function. Prerequisite: Psychology 100 or consent of the instructor.

133. Laboratory in Physiological Psychology.
0+3, Cr. 1. Laboratory to be taken in conjunction with 132.

135. Sensation and Perception.
Cr. 3. An introduction to the study of sensory and perceptual phenomena and the physiological mechanisms that underlie them. Prerequisite: Psychology 100 or consent of the instructor.

136. Laboratory in Sensation and Perception.
0+3, Cr. 1. Laboratory to be taken in conjunction with 135.

138. Learning and Behavior.
Cr. 3. Concepts of learning derived from research with infra-human subjects and the implications for understanding human behavior. Such behavioral patterns are contrasted with those which are not learned, but which represent specific adaptations that have evolved over generations. Prerequisite: Psychology 100 or consent of the instructor.

139. Laboratory in Learning and Behavior.
0+3, Cr. 1. Laboratory to be taken in conjunction with 138.

DEVELOPMENTAL PSYCHOLOGY

140. Human Growth and Development.*
Cr. 3. Life-span approach to human growth and development involving maturational, cognitive and behavioral changes with age. Major empirical findings are reviewed with attention to current theoretical, methodological and practical issues.

142 (242). Psychology of Childhood.
Cr. 3. Study of the maturational, cognitive, social and behavioral changes associated with the development of the child. Prerequisite: 6 credit hours of Psychology or consent of the instructor.

143 (243). Adolescent and Early Adulthood Development.
Cr. 3. Analysis of the biological, psychological, sociocultural and historical contributions to behavior changes during the adolescent and early adulthood years.

CLINICAL-COUNSELING PSYCHOLOGY

152 (252). Behavior Modification.
Cr. 3. The application of learning principles to the modification of human behavior. Discussions include ethical issues and current research relating to behavior management techniques as utilized in self control, education, institutions, business, social, personal and family interventions. Prerequisite: six credit hours of Psychology or consent of the instructor.

153 (253). The Exceptional Child.
Cr. 3. Analysis of the impact of various perceptual, cognitive, physical and social handicaps upon the child. Attention is also given to the study of the gifted, creative child. Prerequisite: one of the developmental psychology courses (140-149) or educational psychology or consent of the instructor.

154 (254). Testing and Measurement.
Cr. 3. Principles and methods of psychological measurement and evaluation with application to specific testing situations. Course intensification option: 1 Cr. Prerequisite: Psychology 100.

156 (256). Introduction to Counseling.
Cr. 3. A review of contemporary counseling theories and processes as they are applied to various problem areas.

ADVANCED PSYCHOLOGY TOPICS, PRACTICE AND RESEARCH

162. Psychology Practicum; Field Experience.
Cr. 1-3. Emphasis is on functions of social-service and mental-health agencies. Each student spends at least four hours each week in a supervised work activity at an agency in Northwest Indiana and one and one-half hours each week in a classroom-discussion meeting. A written report is required. There is one field trip to a participating agency. Prerequisites: junior or senior standing and consent of the instructor. May be repeated for credit to a maximum of nine credit hours; only three credit hours may be applied toward a major.

165 (265). Special Topics in Psychology.
Cr. 1-3. Selected topics based on the special interest areas of students and faculty. These topics have included aging, sex differences, theories and issues, drugs and behavior, community psychology, and altered states of consciousness. Topics and descriptions are announced in advance. Prerequisite: consent of the instructor or Chair of the Department.

190. Psychology Colloquium.
Cr. 1. Faculty and student presentations of research projects, professional interests, and current topics related to psychology. Student participation is expected. Prerequisite: junior or senior major. May be repeated once for credit. S/U grade.

195. Independent Research in Psychology.
Cr. 1-3. Individual research projects under staff supervision. A written report is required. Prerequisite: an advanced laboratory course in psychology (130-139) or consent of the Chair of the Department. The student must submit a Research Proposal Form before registration. This course may be repeated for credit; maximum: six credit hours.

197. Honors Work in Psychology.
Cr. 3. See Honors Work, page 38.

198. Honors Candidacy in Psychology.
Cr. 3. See Honors Work, page 38.

*Credit for Psychology 140 may be earned through the College Level Examination Program subject examination in Human Growth and Development.

Social Work

**Associate Professor Walton;
Assistant Professors Adams (Chair).**

The primary task of this department is to prepare its graduates for entry into the profession at the beginning level of practice. A second objective is to provide a strong background for those students who wish to take graduate education in Social Work. Finally, the Department provides a selection of courses which may enhance the preparation of students who anticipate a career in one of the various helping professions, such as the ministry, health care, education, law, behavioral sciences and criminal justice.

Students who wish to move beyond foundation courses may elect to concentrate in one of the following areas: aging, church social services, criminal justice and urban studies. Joint academic programs exist between the Department of Social Work and the Lutheran Deaconess Ministry (Plan 2), and the Sociology Department, Criminal Justice Studies. Students in these areas prepare curricular plans through joint advisement.

Students may participate in the Student Social Work Organization and also select their class representative to departmental meetings.

The majority of both full-time and part-time faculty hold the Academy of Certified Social Workers credential, as do many of the field instructors.

Major. A minimum of 37 credit hours in Social Work constitutes a major. Courses must include Social Work 51, 110, 120, 130, 140, 155, 156, 165, 181 and 182. The following sequence is recommended for all Social Work majors:

Freshman: Social Work 51

Sophomore: Social Work 110, 120 and 130

Junior: Social Work 140, 165

Senior: Social Work 155, 156, 181 and 182.

Also required are Biology 25 or 51, Psychology [51 or 52] and 100, Sociology 1 and 26, one course in political science and one of the following courses: Economics 71 or 72 or Geography 62.

A student's formal admission into the Department as a major requires approval by the Department following completion of

Social Work 51. Each Social Work major selects a faculty adviser. A manual is available to all majors as a guide to departmental standards.

Degree. The Department of Social Work is fully accredited by the Council on Social Work Education. It offers an undergraduate professional curriculum. The completion of this curriculum and the requirements of the College of Arts and Sciences, including its General Education Requirements, leads to the Bachelor of Social Work degree.

Approval of Schedules. All students who major in Social Work must have their schedules approved by the Chair of the Department at the beginning of each semester.

51. Introduction to the Profession of Social Work.

Cr. 3. The major objective of this course is to inform the student of the basic issues, concepts and systems encountered by the social work practitioner in the helping process in the community. This course is required for all Social Work majors. It can be of great benefit to students pursuing careers in fields such as corrections, education, ministry, law, nursing, medicine and church work. Community volunteer work and observational experiences are required.

110. Social Welfare: Policy and Services.

Cr. 3. The major focus of the course includes a historical survey and review of social welfare policies and programs. A descriptive analysis is made of various private, voluntary and governmental welfare programs and agencies. Values, attitudes, political and economic forces are explored in viewing the American response to the needs of welfare consumers. Prerequisite: Social Work 51 (may be taken concurrently by juniors and seniors) or consent of the Chair of the Department.

120. Human Behavior and Social Environment.

Cr. 3. This course explores the human developmental life cycle and its interplay with social values and community functioning. Theoretical approaches to human development and societal influences are critically examined. Prerequisite: Social Work 51 or consent of the Chair of the Department.

130. American Minority Lifestyles and Human Rights.

Cr. 3. This course offers a study of the social needs of American minority groups in relation to their human rights. Patterns of human development and analysis of social change provide the framework for study of minority rights and lifestyles. This material prepares the student for comprehension and appreciation of current minority issues. Prerequisite: sophomore standing.

140. Professional Intervention and Human Services.

3+4, Cr. 4. A course that introduces the student to both human systems theory (individual, group, community) and to the variety of social work interventions. A community field experience and classroom laboratory are required. Prerequisites: Social Work 51, 110, 120 and 130 or consent of the Chair of the Department.

155. Social Work Practice I.

3+4, Cr. 7. The generic social methods and field instruction course is designed to establish a common base for direct service to people—individuals, family, small group, community—and institutional segments of society. The central theme is that the problems with which the social worker is involved dictate particular social work intervention. The emphasis is on the integration of theories, principles, skills and processes of the various work methods with clients. A professionally directed field practicum is offered each semester. The student works each Tuesday and Thursday in a community social service agency. Prerequisites: senior standing and a major in Social Work.

156. Social Work Practice II.

3+4, Cr. 7. In this continuation course the field work is intensified. Field work is done each Tuesday and Thursday. Prerequisite: Social Work 155.

165. Introduction to Methods of Social Research.

Cr. 3. This course is an introductory overview of the methods of scientific inquiry in the social sciences, particularly social work. Major topics to be covered are problem formation, research design, measurement, data collection, analysis and interpretation and reporting results.

Prerequisite: junior standing or consent of the Chair of the Department.

170. Social Work Colloquium.

Cr. 2-3. A study of selected topics of contemporary concern for the social worker, such as adulthood, clinical methods and techniques for helping professions, housing, independent study, juvenile delinquency, poverty. Listings are announced. Prerequisite: junior standing or consent of the Chair of the Department.

180. Advanced Seminar in Social Work.

Cr. 1-3. Full- or half-semester courses specializing in particular areas of social work practice or methodology such as Administration, Study of Federal Agency Structures, Current Issues in Group Services, Family Therapy, New techniques for Solving Community Problems, Research, Supervision and Children's Services. Prerequisites: junior or senior standing and consent of the Chair of the Department.

181. Current Issues in Social Work.

Cr. 1. This seminar is jointly designed by senior majors and faculty to deal with those issues of concern which currently face clients and practitioners in the social services delivery system. Prerequisite: senior standing or consent of the Chair of the Department.

182. Analysis of Social Policy.

Cr. 3. An intensive study of social welfare programs, principally in the United States, and a historical review of the contemporary forces, primarily social and economic, that have shaped their development. Areas included are housing, income maintenance and health care services. Prerequisite: senior standing or consent of the Chair of the Department.



Sociology

**Associate Professors Martinson
(Chair), Sederberg, Westermann;
Assistant Professors Burfeind,
Venturelli.**

Sociology is the study of the structures and processes of human interaction. Its subject matter ranges from intimate family life to the hostile mob, from crime to religion, from the divisions of social class to the shared beliefs of a common culture.

The Sociology Department seeks to help students achieve an awareness of modern society and of the causes and consequences of human social behavior. Its basic objective is to produce students who understand themselves, the groups in which they participate and their society. By expanding their knowledge of the concepts, theories and research methods of sociology, students develop skills in social analysis, enhance their capacity for self-evaluation and grow in their ability to make informed decisions. In seeking to attain these objectives, the Department has developed a curriculum, grounded in the liberal arts tradition, which is flexible and responsive to student needs. Built around a core of fundamental courses, it provides for a diversity of professional and vocational interests by offering two majors.

The General Major. Intended for students who are interested in graduate study or seek a general foundation in sociology, leading to such careers as leadership in community organizations, recreational leadership, service in governmental agencies, market research, and sales. The general major requires a minimum of 30 credit hours in sociology. Courses must include Sociology 1, 55, 56, 101, and 102. Of the remaining minimum credit hours, not more than three may be taken from the introductory level and not more than three from the foundation level. Students planning to enter careers directly are advised to arrange relevant internships.

A course in statistics is recommended, either Psychology 100 or, preferably, Mathematics 54 (which has as prerequisites Mathematics 35 or 51 and 36 or 52). Prospective graduate students should consider electing a computer science minor.

Criminal Justice Concentration.

Intended for students who wish to enter such fields as law enforcement, probation and parole, corrections, and other criminal justice services, or who wish to prepare for a career in law. The core of the major consists of 33 specified credit hours in sociology, namely, Sociology 1, 3, 33, 40, [55 or 56], [63 or 65], 101, 102, two of [134, 137, 138, or 139], and 150. There are three ways to complete the concentration: 1. The Chicago Urban Semester program of 16 hours (page 134), including an internship appropriate to criminal justice studies. The Department strongly recommends this alternative; 2. A complementary minor or second major, plus Sociology 151, Internship in Criminal Justice II; 3. At least 9 but no more than 15 additional hours in sociology, including Sociology 151, Internship in Criminal Justice II.

If Criminal Justice majors are interested in agency administration or in graduate study, the statistics recommendations described for general majors also apply to them.

Minor. A minimum of 18 credit hours in Sociology constitutes a minor. Courses must include Sociology 1, [55 or 56], 101, 102, and six credit hours taken above the Introductory Level.

Other Options. In addition to these majors and minor, the Department is willing to work with students interested in other areas of service. By the use of the individualized major (page 31) to combine courses in sociology and those of other related disciplines, programs such as leisure and recreation or family life education may be developed. Such programs should be arranged in consultation with the Chair of the Department.

The Department participates in the Cooperative Education program, permitting junior and senior students to engage in paid, professional positions which complement and enhance their academic work. Credits earned through Cooperative Education may, with the approval of the Department Chair, be used to substitute for certain internship requirements. (For further information, refer to course descriptions and to Cooperative

Education, College of Arts and Sciences, page 39.)

Degree. Completion of the degree requirements of the College of Arts and Sciences with a general major in Sociology or the Criminal Justice Concentration leads to the Bachelor of Arts degree.

Approval of Schedules. All students taking a major or minor in sociology should have their schedules approved by designated departmental advisers.

Introductory Level. Courses taught at the elementary level and without prerequisites.

1. Introductory Sociology.*

Cr. 3. The analysis of the major institutions, structures and processes of American society, as well as an introduction to the basic theoretical and methodological approaches of the discipline.

3. The Criminal Justice System.

Cr. 3. A survey of the operations, functions and interactions of the police, the courts and correction agencies; that is, social organizations which respond to crime. Required for the Criminal Justice Major. Every fall semester.

5. Cultural Anthropology.

3+1, Cr. 3. Study of the development and characteristics of culture, with emphasis upon the comparison of cultures in small-scale preliterate societies.

Foundation Level. Courses which build on introductory level courses, providing students with deeper insights into fundamental concepts and theoretical approaches. Prerequisite for all Foundation Level courses (except 33, 40 and 63) is Sociology 1 or 5, or consent of the Chair of the Department. The prerequisite for 33, 40 and 63 is Sociology 3 or consent of the Chair of the Department.

26. The Family.

Cr. 3. A study of the family as a basic social unit and institution, with emphasis on the various forms and functions of the family. Special consideration is given to modern influences on the interaction and organization of American family life.

29. Social Problems.

Cr. 3. An examination of widely recognized current problems, drawing on several social science disciplines, and giving special attention to the question of what kinds of people regard a situation as a problem to be alleviated. Normally at least every fall.

33. Principles of Criminal Law.

Cr. 3. An examination of the principles of criminal law. Intended for those who wish to work in the criminal justice system or to prepare

for the study of law. Required for the Criminal Justice Concentration. Prerequisite: Sociology 3 or consent of the Chair of the Department. Every spring.

40. Field Experience in Criminal Justice.

Cr. 3. Through a series of field trips and discussion seminars, students become acquainted with the variety of agencies in the criminal justice system. Required for and limited to students in the Criminal Justice Major. Prerequisite: Sociology 3 or consent of the Chair of the Department. Every fall.

SOCIOLOGY CORE OPTIONS

General majors take both courses. Minors and Criminal Justice majors choose one course.

55. Interaction Analysis.

Cr. 3. Designed to develop fundamental skills in observing and analyzing interaction according to three or more sociological traditions, such as symbolic interaction, dramaturgy, exchange, group process analysis, or ethnomethodology. Normally every fall.

56. Principles of Social Organization.

Cr. 3. An examination of the basic principles people use to structure their relationships (e.g., age, gender, shared interest, specialization) and the resulting types of social organization most prevalent in modern societies. Types may include networks, alliances, task groups and bureaucracies. Normally every spring.

CRIMINAL JUSTICE CORE OPTIONS

Criminal Justice majors must include one course.

63 (formerly 130). Criminology and Juvenile Delinquency.

Cr. 3. An examination of the definition and extent of crime and delinquency, the theories used to explain crime, and a brief analysis of societal responses to crime and juvenile delinquency. Prerequisite: Sociology 3 or consent of the Chair of the Department. Normally every spring.

65 (formerly 131). Deviance.

Cr. 3. An analysis of the definition and extent of deviance and an examination of theories of how people become deviants. Surveys the forms of deviation: crime, mental illness, drug or alcohol abuse, sexual deviation, etc. Normally every fall.

Advanced Level. Courses designed to provide depth of experience and understanding in narrow subject areas. All have as a prerequisite at least Sociology 1 or 5 or consent of the Chair of the Department. Some courses have additional prerequisites.

101. Development of Sociological Theory.

Cr. 3. Study of the historical development of sociological thought and the contributions of major theorists, along with an introduction to the logic of scientific inquiry and theory building in

*Credit for Sociology 1 may be earned through the College Level Examination Program in Introductory Sociology.

the social sciences. Required of all majors. Every fall.

102. Research Methods in Sociology.

Cr. 3. Strategies for developing and testing hypotheses; comparison of basic and applied research goals; methods of generating and organizing data; computer-aided cross-tabulation analysis. Skills are taught through small-scale projects whenever possible. Required of all majors and minors. Prerequisite: Sociology 55 or 56 or consent of the Chair of the Department. Every spring.

105 (205). Social Structures.

Cr. 1-3. Courses which focus on structured relationships among individuals, groups, processes and sets of beliefs. Topics may range from informal and unplanned relationships to intentionally developed large scale organizations, and may include social class, occupations, gender roles and organized sport.

106 (206). Urban Sociology.

Cr. 3. An examination of the city as a social system. Emphasis placed upon the historical, demographic, and ecological development of urban areas, along with an exploration of major problems confronting American cities. Development of urban life style is also examined.

110 (210). Social Processes.

Cr. 1-3. Courses which focus on processes of social influence, differentiation, development, policy making, control or change. Topics may include socialization, specific forms of deviance, death, collective behavior, minority relationships, etc.

115 (215). Social Institutions.

Cr. 1-3. Courses which focus on socially shared beliefs and practices developed to deal with major social needs. Possible topics include religion, medicine, education, etc.

CRIMINAL JUSTICE SPECIALTY OPTIONS

Criminal Justice majors must include two.

134 (234). Sociology of Law.

Cr. 3. The study of the place of law in society, the relationship between law and social change, and the relationships between the law and other social institutions. Normally fall of even years.

137 (237). Law Enforcement.

Cr. 3. An examination of policing at the local, state and federal levels, from historical and contemporary points of analysis, with emphasis on the relationship between law enforcement and other criminal justice agencies. Prerequisites: Sociology 3 and 63 or 65, or consent of the Chair of the Department. Normally spring of odd years.

138. Criminal Adjudication.

Cr. 3. An examination of adjudicatory processes applied to the criminally accused. This includes pretrial, trial and sentencing practices and procedures, including those in which probation officers participate, with special attention to sociological factors affecting decision making—

ideological, discretionary, structural, interactional, etc. Prerequisites: Sociology 3 and 63 or 65, or consent of the Chair of the Department. Normally fall of odd years.

139 (formerly 133); 239

(formerly 233). Corrections.

Cr. 3. A critical examination of prisons, jails and community correctional services, including the work of probation and parole officers, with emphasis on both historical development and current trends and issues. Prerequisites: Sociology 3 and 63 or 65 or consent of the Chair of the Department. Normally spring of even years.

INDIVIDUALLY SCHEDULED COURSEWORK

150. Internship in Criminal Justice I.

Cr. 3. A student is placed with one criminal justice agency and required to observe and analyze it, using concepts introduced in previous courses. Depending on agency requirements and policies, the student may be assigned a caseload or otherwise expected to assist in agency operations. Required for Criminal Justice majors and limited to them. Prerequisites: Sociology 40 and junior standing or consent of the Chair of the Department.

151. Internship in Criminal Justice II.

Cr. 3. Continuation of 150. Intended for students in the Criminal Justice Concentration who do not elect to participate in the Chicago Urban Semester Program. Prerequisite: Sociology 150.

152. Internship in Sociology.

Cr. 3. A student is placed in a formal organization for one semester and required to observe and analyze part of it, using concepts introduced in previous courses. After becoming familiar with job requirements, the student may be delegated some responsibilities, at the discretion of the organization. Prerequisites: Sociology 1, 55 or 56, and consent of the Chair of the Department.

170. Independent Study in Sociology.

Cr. 1-3. Independent investigation of a specialized topic in sociology. May be taken more than once for credit if the topics are different or if the topics are to be continued.

181. Cooperative Education in Sociology/Criminal Justice I.

Cr. 3. Work experience in a cooperating public or private service agency. Written reports required. Prerequisites: Junior standing and approval of the Chair of the Department.

182-183. Cooperative Education in Sociology/Criminal Justice II-III.

Cr. 3. Continuation of Sociology 181. Prerequisites: Sociology 181 and approval of the Chair of the Department. May be repeated beyond 183 for additional credit.

197. Honors Work in Sociology.

Cr. 3. See Honors Work, page 38.

198. Honors Candidacy in Sociology.

Cr. 3. See Honors Work, page 38.

Theology

Professors Albers, R. Baepier, Droege, Keller, Krodell, Lasky, Ludwig, Rast, Truemper; Associate Professors Brockopp, Lutze, Niedner, Senne (Chair); Assistant Professors J. Moore, Widiger; Instructor Lagerquist.

General Education. The Theology component of the general education requirement at Valparaiso University is three courses of three credit hours each. These courses shall be taken from each of the first three levels indicated in the course listings below. All students are required to take a level I course, ordinarily in their freshman year. This must be followed by a course from level II, ordinarily taken in the sophomore year. In either the junior or the senior year, each student must take at least one course from the level III or IV listings. Non-majors should ordinarily select a course from level III.

Major. A minimum of 30 credit hours in Theology, 21 credit hours beyond the general education requirement, constitutes a major. Courses must include Theology 5 or 6, a course in biblical studies (10, 111-119), a course in the history of the Church and its thought (20, 30, 121-126, 131-139), a course in contemporary religion and practice (40, 50, 141-142, 155-158), a course in history of religions (60, 161-167) and seminar 180 (or in exceptional cases, research 190). Students shall also take four additional courses chosen in consultation with their departmental major adviser.

Minor. A minimum of 18 credit hours in Theology, chosen by the student in consultation with the Chair of the Department, constitutes a minor. At least three courses shall be taken at level III or IV.

Programs. The Department provides programs of study and advising for students who wish to prepare for professional careers in the Church:

1. Programs of study in preparation for Deaconess Ministry are structured by the Department in cooperation with the Lutheran Deaconess Association.

2. Programs for preparation for seminary studies are individually tailored to the needs and interests of the student.
3. Students interested in service as Directors of Christian Education or Youth Workers arrange their programs with their departmental adviser.

Degree. Completion of the requirements of the College of Arts and Sciences with a major in theology leads to the Bachelor of Arts degree.

Approval of Schedules. All students taking a major in theology must have their schedules approved by the Chair of the Department or by their assigned departmental advisers at the beginning of each semester.

Level I. Ordinarily freshman year.

5. Introduction to Christian Theology.

Cr. 3. An introduction to the study of Christian theology, with attention to the religious question, basic biblical themes, central doctrines, ethics and worship.

6. Families of Abraham: Judaism, Christianity and Islam.

Cr. 3. An introduction to the study of religion by giving attention to the sacred writings, central teachings, worship practices and ethical assumptions of the three monotheistic religions, noting both their similarities and their differences. Fulfills the level I theology requirement. Not open to those who have received credit for Theology 5. Consent of the Chair of the Department is required. (This course is designed especially to serve the needs of some of the international students. To insure learning through dialogue, class enrollment will be controlled to create a class with approximately one-half international and one-half U.S. students.)

Note: A Level I course is the prerequisite for all courses listed below.

Level II. Ordinarily sophomore year. Sophomore standing is prerequisite for courses in this level.

10. Literature of the Bible.

Cr. 3. A study of the development of the two Testaments in the framework of the history of ancient Israel and early Christianity. Emphasis is placed on key theological themes and on the literary types within these scriptures.

20. Formative Events in Church History.

Cr. 3. A study of those events which shaped the Church's understanding of its nature and mission.

30. The Christian Faith.

Cr. 3. A study of the formation and development of Christian creeds and doctrine.

40. Christian Ethics.

Cr. 3. A study of norms for moral judgment and the dynamics for moral action in the light of the Christian faith.

50. The Church in the World.

Cr. 3. A study of the life and mission of the Church, with particular emphasis on movements for renewal, reform and reunion, as well as on current events in Church life.

60. History of Religions.

Cr. 3. A study of major religions and of the ways in which they interpret the nature of reality and the relationship between humanity and the divine.

70. Christianity and Culture.

Cr. 3. A study of the way in which theology interprets basic elements of the Christian tradition in the context of cultural beliefs and questions.

Level III. Ordinarily junior or senior year.

Prerequisites for courses in this level are one course at level II and junior or senior standing.

100. Topics in Theology.

Cr. 3. As special circumstances and opportunities allow, certain unlisted courses may be announced under this listing. A student may receive credit for this course more than once, provided that the topics are different.

THE BIBLE AND ITS WORLD

113. Archaeology and Religions of the Ancient Near East.

Cr. 3. A study of the religions of Mesopotamia, Egypt and the Levant as known from archaeology. Special reference is made to the Israelites in the context of the ancient Near East.

114. The Books of Moses.

Cr. 3. A study of the Pentateuch with emphasis on Israel's understanding of the beginning, the history of the patriarchs, the exodus, the wilderness wanderings, and the preparation for entering the promised land.

115. David and the Kings of Israel.

Cr. 3. An investigation of the Deuteronomic History (Deuteronomy-2 Kings), with special attention to the period of the kingship and the importance of Jerusalem in the Old Testament.

116. The Prophets of Israel.

Cr. 3. A study of the role of the prophets in Israelite religion. Special attention is given to the historical origins of the prophetic movement, its impact on Israel's political, social and religious life, and the continuing significance of the prophetic message in Jewish and Christian thought.

117. Psalms and Prayers of Ancient Israel.

Cr. 3. A study of the prayers in the Book of Psalms, with attention to the language and dynamics of prayer. Use is made of form-critical results in the study of the psalms.

118. Jesus and the Gospels.

Cr. 3. A comparative study of the New Testament gospels with a focus on the uniqueness of each in its presentation of the story of Jesus.

119. Studies in Pauline Thought.

Cr. 3. Studies in the life and thought of Saint Paul, focusing on selected New Testament letters.

CHURCH HISTORY

121. Early Christianity.

Cr. 3. A study of major events, themes and developments in the history of the church in the period beginning with the ministry of Jesus and the Apostles and ending ca. 500.

122. Reformation Christianity.

Cr. 3. A study of the impact of the theology of the Protestant reformers on the church with special emphasis on the work of Martin Luther.

123. History of Christianity Since the Reformation.

Cr. 3. A study of the history of Christianity from 1650 to the present.

124. The American Religious Experience.

Cr. 3. An investigation of American religious thought with special emphasis on the interaction between religion and cultural development.

125. History of Lutherans in America.

Cr. 3. A survey of the history of American Lutherans from colonial times to the present, with emphasis on the nineteenth century immigrations and twentieth century trends.

126. History of Women in the Church.

Cr. 3. An investigation from biblical times to the present of theological understandings of women's roles in Christian religious communities and of the cultural contexts that shape such attitudes and practices.

CHRISTIAN THOUGHT

131. Life and Thought of Martin Luther.

Cr. 3. A study of the life of Martin Luther and the structure of his thought.

132. Theology of the Lutheran Confessions.

Cr. 3. A study of the historical background and doctrinal content of the confessions of the Lutheran Church.

134. Comparative Christianity.

Cr. 3. An examination of various Christian denominations in the light of their history and confessions.

136. Trends in Twentieth Century Theology.

Cr. 3. A survey of twentieth century theology, including a study of major currents and of representative works of particular theologians or schools of thought.

CONTEMPORARY ETHICAL ISSUES

141. Introduction to Bio-Ethics.

Cr. 3. A study of the moral issues raised by modern advances in medicine and biological research (e.g., abortion, euthanasia, genetic engineering and health care). Attention is given both to general ethical theory and to the analysis of particular issues.

142 (242). Christian Faith and Contemporary Politics.

Cr. 3. A study of how different Christian thinkers have understood the nature and function of government and the relation of the Christian faith to political action.

CHURCH AND MINISTRY**155 (255). Principles and Forms of Worship.**

Cr. 3. A study of the principles and language of worship with emphasis on the theology of worship, ritual, the role of tradition, and the relationship between worship and contemporary culture.

156. Christian Response to Social Victims.

Cr. 3. A study of theological resources and possible strategies for individuals to become involved in serving the victims of such social problems as aging, poverty, deteriorating neighborhoods, criminal justice, alcoholism and physical handicaps.

157. The Church and Crises of the Eighties.

Cr. 3. An examination of the Church's past experience and its theological resources in order to anticipate and cope effectively with potential social crises (e.g., unemployment, undocumented aliens, racial tensions, global injustice).

158. Spiritual Needs and Health Care.

Cr. 3. Study and practice in the assessment of the spiritual needs of patients and in providing appropriate care in meeting those needs within the context of medical treatment. Open only to students in nursing or the pre-medical arts programs, or with consent of the instructor.

HISTORY OF RELIGIONS**161. Studies in Judaism.**

Cr. 3. Studies of selected topics in Judaism: biblical, rabbinic and contemporary. A student may receive credit for this course more than once, provided that the topics are different. These offerings are sponsored in part by the Jewish Chautauqua Society.

162. Understanding Islamic Religion and Culture.

Cr. 3. The study focuses on the life of Muhammad, the teachings of the Quran, traditional practices and institutions in Islamic society, and the significant contemporary developments in the Muslim world.

163. Religions of China and Japan.

Cr. 3. A study of the religious worldview of China and Japan, seen both in the traditional folk religious practices and in the organized religions of Confucianism, Taoism, Buddhism and Shinto. Special attention is given to the expressions of religion in art and to the role of religion in modern China and Japan.

164. The Buddhist Tradition.

Cr. 3. A study of the origins of Buddhism in India, its expansion into and influence on the cultures of Southeast Asia, its special adaptations in China and Japan, and the Buddhist presence in the United States today. Attention is given to the varieties of Buddhist teaching and practice.

165. Religion in Africa.

Cr. 3. A study of religion in Sub-Saharan Africa. Attention is given to the nature and function of religion in the traditional societies and to the modern developments of Christianity and Islam in Africa.

166. Studies in Mythology.

Cr. 3. A study of myth as a primary expression of the experience of the religious dimension of existence. Central to the concern of this course is the interpretation of the "living myths" of traditional societies (rather than the classical mythologies of Greece and Rome) such as creation myths and myths of initiation.

167. Encounter with Non-Christian Religious Movements in America.

Cr. 3. Mini Session Only. A study of some of the non-Christian religious groups currently active in the United States, such as Bāhai, Hare Krishna Society, Zen Buddhism, and the Unification Church (i.e., the "Moonies"). Wherever possible, the study of each group is approached through its origin in one of the living world religions. At least one field trip is included.

CHRISTIANITY AND CULTURE**171 (271). Theology and the Human Sciences.**

Cr. 3. An investigation of areas of common interest in the fields of Christian theology and the social or personality sciences.

172. Christianity and Humanism.

Cr. 3. A study of the Christian dialog with and response to contemporary humanism, with special emphasis on understanding the positive contribution of the atheism implicit in some of its forms.

174. Christian Faith and Modern Literature.

Cr. 3. An exploration of the meaning of Christian faith in dialog with modern literature, particularly with a view toward understanding the human condition and discovering implicit religious dimensions in representative novels and plays.

175 (275). Understanding Death and Dying.

Cr. 3. An exploration of the biblical meaning of death in relation to contemporary cultural meanings. Each student is encouraged to consider the meaning of his or her own death. Special attention is given to the care of the dying.

Level IV. These courses are designed primarily for majors. Prerequisites are one course at level II and junior standing or above.

111. Introduction to the Bible: Old Testament.

Cr. 3. A study of the history and theology of the Old Testament with attention to the role of the Old Testament in Christian faith. Not open to students who have completed Theology 10.

112. Introduction to the Bible: New Testament.

Cr. 3. A study of the history and theology of the New Testament with attention to its rootage in the Old Testament. Prerequisite: Theology 111.

133. The Lutheran Doctrinal Tradition.

Cr. 3. A study of Lutheran doctrinal theology and its transmission from the Reformation era to the present, with special reference to its reception and development in American Lutheranism.

138 (238). Systematic Theology I.

Cr. 3. A study of the nature and task of systematic theology, emphasizing questions of prolegomena and method for theology in a secular context.

139 (239). Systematic Theology II.

Cr. 3. Continuation of Theology 138 emphasizing the constructive task of contemporary systematic theology, and studying the structure and content of the Christian faith. Prerequisite: Theology 138 or consent of the Chair of the Department.

151. Deaconess Work.

Cr. 3. A study of various aspects of Deaconess ministry, care and counseling. This course may not be used to fulfill the Theology component of the general education requirement, nor may it be counted toward a major or minor in theology.

153. Clinical Deaconess Education.

Cr. 3. A carefully supervised practicum in ministry to the physically ill and the elderly. This course is designed principally for senior Deaconess students. S/U basis. This course may not be used to fulfill the Theology component of the general education requirement, nor may it be counted toward a major or minor in theology.

154. Practicum in Ministry.

Cr. 1-3. Field experience in various local agencies, together with reflection on the work being done. This course may not be used to

fulfill the theology component of the general education requirement, nor may it be counted toward the theology major or minor. It may be repeated for a maximum of six credits, and is offered only on an S/U basis. Arranged with the Chair of the Department.

180. Theology Seminar.

Cr. 3. Advanced study of selected areas or issues in the discipline of theology. Varied listings are announced. Prerequisites: senior status and consent of the Chair of the Department.

190 (290). Supervised Reading and Research.

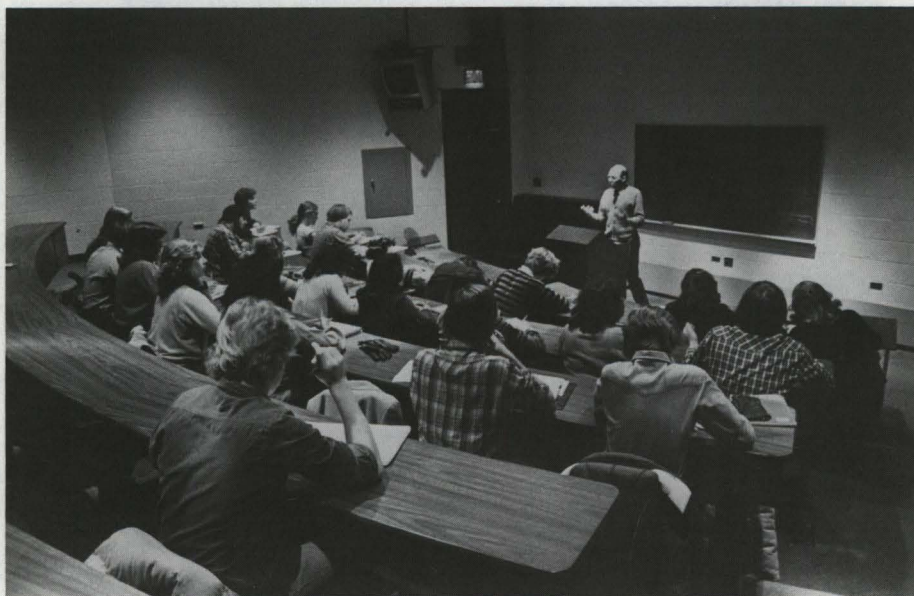
Cr. 1-3. An opportunity for students to read a number of significant works on a given topic in theology, or to do research on a topic which is not covered in any scheduled course offerings of the Department and to write a major paper. Prerequisites: junior standing, 12 credit hours in theology, and consent of the Chair of the Department.

197. Honors Work in Theology.

Cr. 3. See Honors Work, page 38.

198. Honors Candidacy in Theology.

Cr. 3. See Honors Work, page 38.



CHRIST COLLEGE



Arlin G. Meyer, Ph.D., Dean

Mueller Hall

Professors A. G. Meyer, Riedel, Rubel; Associate Professors Lee, Olmsted, Piehl, Reiner, Schwehn; Instructor Bentley.

Organization. Christ College is an honors college emphasizing liberal studies and providing a place in undergraduate study for courses and programs which implement honors standards and offer the freedom and flexibility for educational experimentation.

The College shares the general purposes of Valparaiso University. Its membership is drawn from the University's four undergraduate colleges in which each student is completing a normal specialized program. Through these colleges a University degree is granted with the added honors designation, "Christ College Scholar" or "Christ College Associate," for students who at the same time have met the requirements of Christ College.

The program of courses offered by Christ College replaces many of the general education courses required of all students by the University. This program, supplemented by seminar work, invites its students to inquire beyond their

specialized interests into larger contexts of thought, action and production, encouraging thereby the exploration of values and the integration of knowledge. Such liberal studies are an excellent preparation for many professions. Personal and intellectual growth of high quality is fostered by a resident staff which works closely with small numbers of students.

Above all, Christ College encourages the restlessness of the seeker who desires to know things as they are and whose thought and imagination have been captured by some vision of things as they might be under the grace of God and the exertions of human will and intelligence.

To achieve these purposes Christ College provides:

1. A variety of planned programs and supervised studies leading to a student's graduation with the honors designation, "Christ College Scholar" or "Christ College Associate."
2. One or more comprehensive Freshman Programs with general education experience at the level of honors.

part of the University's general education requirements.

3. A range of courses and programs, largely experimental or inter-disciplinary in nature, which do not naturally fall into the traditional division of work among the regular departments.
4. Co-curricular experiences, including lectures and conferences designed to foster a reflective and civilized style of life as well as involvement in the problems of modern society.
5. Opportunities to work out a theology of life and vocation.
6. A new physical setting which facilitates immediate relationships between students and faculty as well as communication among the traditional divisions of knowledge.

The Freshman Program. The program is a network of activities designed to capitalize on the educational opportunities arising from a series of carefully designed general studies. The program is offered to a relatively small group of freshmen who are willing to invest more of themselves in the academic enterprise than might normally be required of them. Small classes, tutorial work and an experimental flair characterize the multi-disciplinary work of the program.

The program is planned as a two-semester sequence and carries eight credit hours per semester. The successful completion of the program satisfies part of the general education requirements of the student's college. Students from the professional colleges as well as from the College of Arts and Sciences are enrolled in the program. A further description of it is available from the Dean of the College.

Students are admitted into the program upon approval of their applications for admission. The application form, which is available through the Dean's Office, asks that students provide evidence of their ability to profit from the program, together with an expression of their personal intellectual goals. Since a limited number of students can be accepted for the program, the Christ College staff chooses its registrants from among the applicants.

Admission and Membership. Any student at Valparaiso University is welcome to enroll in the courses offered by Christ College, subject to the approval of the

instructor of the course. Students who wish to become members of the College may apply for admission beginning with their sophomore year but no later than the middle of their junior year. Students admitted to the College are designated "Members of Christ College." As such, students are at the same time enrolled in another University college; they are jointly advised by their departmental adviser and their Christ College adviser.

In admitting students, consideration is given to their interests and goals, their academic achievement and promise, and evidence of initiative, originality, creativity or qualities of leadership.

Once admitted to membership, the student's status is periodically reviewed by the faculty to determine whether the student is satisfying the standards and requirements of Christ College. These requirements include satisfactory academic progress toward the College's stated goals and contribution to the common life of the College and the University. Even when a student is not directly involved in the courses offered by the College, he shall contribute to the College's common life, partly through his relationship with his adviser and partly through membership in the Christ College Symposium which meets periodically during each semester at a regularly scheduled hour. The student may further contribute by assisting in teaching; opportunities for assisting in instruction are arranged particularly for senior students.

The faculty takes an interest in the total program of each member. Accordingly, it may authorize certain variations in the normal academic requirements of a student if such variations seem desirable. For example, it may permit a student to carry extra credit hours, to waive prerequisites for advanced courses, to acquire academic credit through examination and to waive certain University requirements if such waivers are justified. In general, the faculty may tailor a program to meet a student's interests and needs within the general framework of the University's objectives.

Membership in Christ College is never terminated by the mechanical application of arbitrary criteria such as grade point average or the student's academic record for a particular semester. In general, Christ College students should expect to maintain

an average grade of B or better, but in every case the judgment of whether a student should be admitted, retained or re-admitted as a member of the College is made only after thorough consideration of the probable best interests of the student.

Members of the College are normally required to meet, by course examination or other evidence of qualification, the regular requirements for graduation except where explicitly modified. The faculty of Christ College may recommend such adjustments in these requirements as are in the spirit of the University's requirements and in the best interests of the students.

A member of Christ College may graduate as a **Christ College Scholar** or as a **Christ College Associate**.

Christ College Scholar. The requirements for graduating with this designation are:

1. Membership in Christ College for a minimum of three semesters.
2. Twenty-five credit hours of work in courses in the College at a grade average of at least B. Students who have completed part or all of the Freshman Program need take only twenty-one additional credit hours.
3. Humanities 105 and 150.
4. One course in religion sponsored by Christ College.
5. Liberal Studies 155 and 198.
6. Two additional courses in Christ College, ordinarily taken during the junior and senior years. These courses shall be junior-senior seminars, tutorial studies or independent study work taken under the auspices of Christ College. Students enrolled in an off-campus program of the University may petition to waive one of these two courses.

Christ College Associate. The requirements for graduating with this designation are:

1. Membership in Christ College for a minimum of three semesters.
2. Seventeen credit hours of work in the College at a grade average of at least B. Students who have completed part or all of the Freshman Program need take only fourteen additional credit hours.
3. Humanities 105 or 150.
4. One course in religion sponsored by Christ College.
5. Liberal Studies 155 and 198.
6. One additional course in Christ College, ordinarily taken during the junior or senior year. This course shall be a junior-senior seminar, tutorial studies, or independent study work taken under the auspices of Christ College. Students enrolled in an off-campus program of the University may petition to waive this course.

Urban Semester. The following courses are offered in a residential program in Chicago in cooperation with the Associated Colleges of the Midwest:

Urban Studies 138.	4 Cr.
Urban Studies 148.	4 Cr.
Urban Studies 178.	4 Cr.
Urban Studies 188.	4 Cr.

All sophomores, juniors and seniors at the University are eligible to participate in

this program. Students shall be admitted to this program on the recommendation of an appropriate committee. Detailed descriptions of the courses appear on page 134.

Valparaiso University students register at Valparaiso for the Chicago Urban Semester and pay to Valparaiso University the general fee charged of all full-time students. Expenses^o for travel, meals and lodging are paid directly by the students. The Chicago Urban Semester gives full credit toward graduation from Valparaiso University. The program is offered in both the fall and the spring semesters.

Special Program in the Humanities.

A student with a first major in any department of the College of Arts and Sciences may earn a second major in an interdisciplinary study of the humanities. This combination comprises the Special Program in the Humanities.

The aim of the program is an increased knowledge of the human world and the acquisition of skills leading to the enjoyment and understanding of a wide range of imaginative and intellectual works.

The courses in the program focus on a variety of works and ideas such as lyric poetry, various kinds of argument, analyses of the symbolic structures of society and significant concepts found in scientific literature. These courses cultivate the arts of interpretation and judgment which may be applied to texts as well as to events in social and political life. This activity leads to further reflection on central cultural problems of our time, so that the student is encouraged to make an independent effort to assess statements of facts and test values among competing contemporary and traditional claims.

A brochure offering detailed information on the Special Program in the Humanities is available in the Dean's Office. A brief outline of the study plan follows:

- I. A major approved by any department in the College of Arts and Sciences.
- II. Interdisciplinary major in the Humanities.

Note: As background for this program, students should develop historical perspective, some appreciation of the fine arts and some insight into the relation of theology and the imagination before or during their formal work in the program.

Members of Christ College who have taken the College's freshman-sophomore offerings should also take an appropriate art or music course and an upper division theology course related to this program as approved by their advisers. Students who have not taken the lower division program in Christ college should take History 5 and 10, or Philosophy 51 and 53, or two courses in English literature in addition to the art or music course and the upper division theology course mentioned above.

A. Core Sequence.

1. Humanities 150	4 Cr.
2. Humanities 155	3 Cr.
3. Liberal Studies 155	3 Cr.
4. Liberal Studies 198	1 Cr.

B. Supplementary Courses.

Each student will select three courses from:

Liberal Studies 191	3 Cr.
Humanities 160	3 Cr.
Humanities 170	3 Cr.
Humanities 180	3 Cr.

Selection of specific seminars or sequences of seminars is determined through advising and continued review of the student's program.

C. Independent Study.

Humanities 186, 3 Cr. An independent study resulting in an essay on an approved topic. A study proposal is to be submitted by the end of the spring semester of the junior year.

The Special Program in the Humanities may also serve as a nucleus or coordinated portion of the Individualized Major of the College of Arts and Sciences (page 31). The Special Program may be taken as an academic minor, which shall consist of a minimum of 16 credit hours, including Humanities 150. Any of the 160-180 seminars may be taken individually or in combination by any student, subject to permission of the instructor.

Degrees. Completion of the degree requirements of the college in which the Christ College student is concurrently enrolled leads to the bachelor's degree appropriate to that college. In addition, a member of Christ College, by meeting the appropriate requirements, may graduate as a "Christ College Scholar" or "Christ College Associate," and/or with the designation, "Special Program in the Humanities." The transcript carries the notation along with an explanation of its meaning.

FRESHMAN PROGRAM

Christ College 30. Texts and Contexts I: An Introduction to Western Thought.

Cr. 8. This course offers an opportunity for intensive study of great works in the Western tradition through the sixteenth century. The close reading of primary texts is accompanied by a survey of the wider aspects of the historical epoch or milieu appropriate to each text. Readings are drawn from the areas of history, literature, philosophy and religion. Advisory grades (A-F) are given throughout the semester, but the final grade is S/U.

Christ College 40. Texts and Contexts II: An Introduction to Western Thought.

Cr. 8. A continuation of Christ College 30. The first seven weeks focus on the seventeenth through nineteenth centuries. The second seven weeks are devoted to seminars on topics drawn from the modern period. Each student conducts a major investigation of a problem to be formulated in the seminars.

URBAN SEMESTER (CHICAGO)

Urban Studies 138. The Core Course: Public Policy in an Urban Center.

Cr. 4. A survey of three or four important urban policy areas giving special attention to issues being publicly discussed during the current semester. The course relies on presentations by individuals actively involved with the topic at hand, selected to provide different and sometimes contradictory perspectives. The policy areas are selected from among the following: health care, urban politics, neighborhood development, mass transportation, public education and municipal finance. S/U grade.

Urban Studies 148. The Seminar.

Cr. 4. Each student chooses one urban issue to examine in depth in a seminar involving readings, class discussions and field visits. Topics represent a range of academic disciplines, usually making it possible to select a seminar relating to a major. Recent seminar titles included City Politics, Urban Planning, Arts in the Black Community, Sexism and Racism, The Helping Professions, Dynamics of Urban Housing. Graded A-F.

Urban Studies 178. The Internship.

Cr. 4. Each student devotes 15 hours per week to an agency which can provide direct involvement in city life and exposure to a particular career environment. The placement is determined jointly by the student and staff during the first week of the semester. A wide range of placements is available. Graded either A-F or S/U at the student's choice upon entry into the program.

Urban Studies 188. Independent Study Project.

Cr. 4. Each student pursues one topic from his Chicago experience under the supervision of an individual faculty member. Some projects grow out of the Internship whereas others are based on another component of the program. The student may elect to write a research paper or a creative piece, or to use photographic or other visual media. Graded A-F.

GENERAL PROGRAM

Humanities 105. Word and Image.

Cr. 4. A study of selected literary and intellectual texts, with special emphasis on the relationship of these texts to contemporary works of art. These classic texts are read, analyzed and discussed in seminar settings, supplemented by plenary sessions devoted to lectures and discussions on paintings.

Prerequisite: Christ College 40 or English 5.

Religion 100. Studies in Christian Scriptures and Theological Classics

Cr. 3. A study of one or more major topics in the history of Christian thought, with attention to the ways that these topics have been addressed by the Scriptures, classics in theological discourse, and other significant writings.

Religion 180. Issues in Contemporary Christian Thought.

Cr. 3. A study of contemporary Christian writers and the issues they deal with in their effort to relate the Christian faith to modern culture.

Philosophy 101. Philosophy of the Arts and Sciences.

Cr. 3. An exploration of the liberal arts and their use in the study of various subject matters.

Liberal Studies 140. Special Topics.

Cr. 2-3. Each year Christ College offers courses, often in the form of seminars, which are open to sophomores, juniors and seniors in the University, dealing with themes of social, intellectual or artistic importance. These courses are ordinarily interdisciplinary in nature. Topics dealt with in the past and likely to be repeated in the future include:

- Art and Aesthetic Judgment
- Science, Technology and Public Policy
- Changing American Lifestyles
- History of Socialist Economic Thought
- Theology and the Imagination: Comedy
- Law, Society and Medicine
- Religion and Politics
- Law and Society

Liberal Studies 155. Tutorial Studies.

Cr. 3. The course presents opportunities for inquiry into significant educational, vocational and social issues, using the resources of the classical liberal arts tradition. During the first seven weeks students read common texts that raise significant problems concerning educational, vocational and social choices in a pluralistic world. During the second seven week period students pursue a topic that requires independent investigation and judgment, under guidance of the instructor. Open only to members of Christ College.

Liberal Studies 185. Christ College Symposium.

Cr. 0. A periodic occasion for presentation and discussion of items and topics of special interest to members of the Christ College community. S/U grade.

Liberal Studies 191. Inquiry in the Liberal Arts.

Cr. 3. A course in the theory and practice of the liberal arts. Students in this course collaborate with instructors as tutorial assistants in other courses offered by the College. S/U grade.

Liberal Studies 194. Independent Study Project.

Cr. 2-6. A special independent study project arranged with a member of the faculty. Approval of this project must be obtained from the faculty mentor and the Dean of the College. Forms for this project are available from the Dean's Office.

Liberal Studies 198. Christ College Colloquium.

Cr. 1. A colloquium offered under the supervision of the faculty of Christ College and built upon the work students have begun in their tutorial studies. Each year the colloquium is focused on a common topic and structured around presentations based on student research. Open only to members of Christ College. Prerequisite: Liberal Studies 155 and consent of the Dean.

Public Affairs 100. The Legal Process.

Cr. 3. A study of leading legal concepts, methods of legal reasoning and the function of the law in the social and economic order. Prerequisite: consent of the Dean.

Public Affairs 130. The Philosophy of Public Discourse.

Cr. 4. A study of the classical liberal arts of language and an examination of their use in selected classical and popular examples of discourse about the public and its affairs. Prerequisite: consent of the Dean.

Public Affairs 135. Public Affairs Seminar.

Cr. 3. Application of the arts of inquiry, invention and judgment to a selected issue currently under public discussion. The approach is interdisciplinary from the standpoint of involving several academic and professional fields and of shaping new questions for research and policy formation. Topics of seminars offered in the past include The Modern City, Philosophy and Public Affairs, The American Right Wing.

SPECIAL PROGRAM IN THE HUMANITIES

Humanities 150. Interpretation.

Cr. 4. An introductory study of interpretation through the examination of selected primary materials in the humanities, the social sciences, or the natural sciences. Sections focussing on two or three of the above three areas will be offered each spring semester. Specific questions of authorial intention, of the place of language, symbol, and tradition in society, of audience expectation and response, of appropriate modes of inquiry and methods of validation, of the uses of mathematical language, and the role of participant-observer are considered in the context of recent theory and practice on a variety of topics. Interpretation in the Humanities required of humanities majors.

Humanities 155. Literature, Religion and Modernity.

Cr. 3. An examination of religious elements in the rhetoric and style of modern writers. Topics include religion and rhetoric, the religious symbol, aesthetics of religious art. Prerequisite: consent of the Dean.

Humanities 160. Humanities Seminar.

Cr. 3. A study of a particular topic (e.g., Christian Humanism, Politics and the Novel, Technology and Culture) on the basis of works

selected from the various fields of the humanities. Prerequisite: consent of the Dean.

Humanities 170. Humanities Seminar.

Cr. 3. A study of representative persons whose work and life have had a significant influence in Western Tradition (e.g., Dostoyevsky, Freud, Goethe, Kant, Aristotle). Prerequisite: consent of the Dean.

Humanities 180. Humanities Seminar.

Cr. 3. A study of the thought, sensibility and social context of a particular period (e.g., The Medieval Experience, The Romantic Movement, Images of the Twenties) through an examination of selected works from the period. Prerequisite: consent of the Dean.

Humanities 186. Independent Study.

Cr. 3. A course of study arranged by the student with an instructor. The study must comply with requirements and options for independent study as described under the Special Program in the Humanities.

Humanities 195. Value and Judgment in the Humanities.

Cr. 3. A study of evaluative problems encountered in assessing the significance of selected texts and/or works in the performing or fine arts on which students have reflected in their undergraduate experience.



COLLEGE OF BUSINESS ADMINISTRATION



Urschel Hall

John A. Miller, D.B.A., Dean
Mary J. Martin, M.S., Assistant Dean

Professors Haber, J. Miller;
Associate Professors Buckley,
Ehrenberg, Griffin, Listman,
Mainstone, McCuddy, Weigel;
Assistant Professors Carrier, Hay,
Hires, Koshuta, Long, Milleville, Shah,
Yonan; Instructors Martin, R. Miller.

Organization. The College is a separate administrative and instructional unit of the University under the direction of the Dean of the College and offers two degrees: a Bachelor of Science in Accounting (with a major in Accounting) and a Bachelor of Science in Business Administration (with a major in Business Administration or Business Economics). A student selecting the Business Administration major has the option of concentrating in marketing, finance or human resource management.

Objectives. The increasing size and complexity of business organizations and the changing economic, political, legal and social environments require that business

students learn to approach problems from the viewpoint of many disciplines. Recognizing the dynamics of our contemporary environment, the faculty in the College of Business Administration advocates a philosophy of education characterized by the broad and the fundamental; it supports a teaching methodology oriented toward the analytical rather than the predominantly descriptive. The curriculum in general education assures each student exposure to a broad range of disciplines, problem-solving techniques and methods of inquiry. The business curriculum likewise introduces students to opportunities which help develop concepts, tools of analysis and techniques of evaluation which serve as a foundation for their growth into competent and ethically responsible business men and women. Such a philosophy is particularly appropriate for undergraduate education in business, which, though it properly concerns itself with preparation

for professional life, must also concern itself with life in general.

The Major Field. The business core provides background in the production and marketing of goods and/or services and the financing of the business enterprise; it builds on the knowledge gained in the general education component. The student becomes familiar with accounting and quantitative methods that have application to the solution of business problems. Attention is given to ethical and social issues that confront modern business organizations within an integrative, capstone, policy-determination experience. In addition to taking certain prescribed courses in the core, the student must complete a major in Accounting, Business Administration or Business Economics. The requirements for each major are set forth in the curricula described from pages 140-141.

Each of the three curricula requires that the student devote approximately one-half of his time to required and elective courses in liberal arts. The required courses include English, theology, the natural sciences, mathematics, and social and behavioral sciences. Students may select liberal arts electives from any of the natural sciences, mathematics, humanities (fine arts, history, philosophy, etc.), foreign languages, social sciences, or behavioral sciences. The student normally chooses elective courses in those areas which provide support to his professional program. Specific details concerning the prerequisites for courses in the liberal arts can be found in the announcements of the College of Arts and Sciences in this bulletin.

Minor. A student may declare a minor in the College of Arts and Sciences. No more than two courses (except economics) of specified liberal arts courses required for a College of Business Administration degree may be used in fulfilling the requirement of a minor. The minor is noted on the student's official academic record.

Admission. The general requirements for admission to the University and to the College are found on pages 171-173 of this bulletin.

Transfers. Students currently enrolled at Valparaiso University and wishing to transfer into the College of Business

Administration, as well as those from other universities who wish to enter, must meet the requirements for advancement to upper division course work. For the transfer to occur within the lower division level, a minimum cumulative grade point average of 1.7 must be demonstrated. Transfer students should refer to page 175 regarding theology requirements and to page 11 for the Freshman Studies requirement.

Freshman or sophomore transfers from other accredited institutions who have completed business courses designated as upper division (101-199) in our bulletin do not automatically receive upper division transfer credit. Evaluation of such credit is made by the Dean's Office. Any course work in business and economics completed at other colleges or universities with a grade of D+ (1.3) or less does not carry transfer credit.

Advancement to Upper Division.

For advancement to upper division (courses 101 or above) in the College, a student must complete a minimum of 56 credit hours with an overall cumulative grade point average of at least 2.0. In addition, the student must complete all of the lower division curriculum courses listed below with no grade less than C—.

DESIGNATED LOWER DIVISION COURSES

Mathematics 51	4 Cr.
General Management 50	3 Cr.
Accounting 52	4 Cr.
Accounting 55	3 Cr.
General Management 62	3 Cr.
Economics 71	3 Cr.
Economics 72	3 Cr.
Total	23 Cr.

Upper Division Standards. For a student in the upper division to remain in good academic standing, he must maintain a minimum cumulative grade point average of 2.0 in all course work and in the major (all business courses). In addition, the student must receive no grade lower than C— in upper division courses offered by the College of Business Administration.

Graduation Requirements. To be eligible for the degrees, Bachelor of Science in Accounting or Business Administration, a student must complete one of the three prescribed curricula found on the following pages. The student must also demonstrate a minimum academic standing of 2.0 in all course work and in the major (all business courses) and meet

all the additional requirements for graduation established by the University (see pages 182-183 in this bulletin).

S/U Grading. This option is permitted in all non-business courses except Mathematics 51 and Economics 71 and 72.

Advisement. Advisement of students admitted to the College is under the direction of the Advisement Office. The Assistant Dean helps freshmen and sophomores to select courses and helps them to interpret the requirements for orderly progress toward the degree. Faculty members are available for assistance. Each upper division student in the College is assigned a full-time business faculty adviser to assist with career objectives.

STUDENT ORGANIZATIONS

Students may elect or be invited to join one or more of the following professional fraternities or societies.

Kappa Phi Chapter of Delta Sigma Pi. This international business fraternity of over 200 chapters and 100,000 members worldwide has been organized to foster the study of business in universities, to encourage scholarship and social activity and to promote closer affiliation between the commercial world and students of business.

Accounting Society. The society's objectives are to promote and reward scholastic and professional excellence in the field of accounting, to provide opportunities for association between members of the Society and practicing accountants, and to encourage the development of ethical, social and public responsibility. Qualified candidates must have an overall cumulative grade point average of at least 3.0 and a cumulative grade point average of at least 3.25 in all accounting courses.

American Society of Personnel Administration. ASPA is a professional association organized to provide its members with assistance in their professional development, to stimulate research in the profession, and to promote leadership in establishing and supporting standards of professional excellence. Student members number over 3,000.

Financial Management Association National Honor Society. This honor

society encourages and recognizes scholarship in the field of finance. Candidates must be students of business finance or banking and must have completed at least one-half of the credit hours of the appropriate degree program. The minimum requirement for juniors is an overall grade point average of 3.2, for seniors is an overall grade point average of 3.0, and a minimum grade point average of 3.2 in all business finance and banking courses.

Richard E. Laube Student Chapter of Financial Management Association.

The organization promotes scholarship and professionalism within the field of finance and sponsors a student managed investment club. Student and faculty sponsored programs are designed to enhance the classroom experience and to help students make the transition from college to business. Membership is open to students concentrating in finance.

William E. Urschel Chapter of the American Marketing Association. This organization promotes scholarship and professionalism within the field of marketing. Student and faculty sponsored programs are designed to enhance the classroom experience and to help students make the transition from college to business. Membership is open to students concentrating in marketing.

Chi Beta Alpha. This local honor society was established in 1979 to recognize students for academic achievement in the College. Membership is limited to a small number of junior and senior students.

Omicron Delta Epsilon. This international honor society recognizes undergraduate students for their scholastic attainment in the area of economics. Its objectives are to establish closer ties between students and faculty and to encourage discussion on economic topics. Students who have completed twelve credit hours of economics with a grade point average of 3.00 or better and have a similar average in their overall scholastic work are eligible for membership. The Delta Indiana Chapter was established at Valparaiso University in 1969.

BACHELOR OF SCIENCE IN ACCOUNTING

The degree in Accounting prepares students for professional careers in public accounting, industry, financial institutions and not-for-profit organizations.

General Education

Freshman Studies

Theology 5	3 Cr.
English 5	3 Cr.
History 5	3 Cr.
Freshman Seminar 5	3 Cr.
Total	12 Cr.

Academic Area Studies

Theology Level II and Level III	6 Cr.
English 25	4 Cr.
Mathematics 51	4 Cr.
Mathematics 52	4 Cr.
Economics 71-72	6 Cr.
Computer Science 17	3 Cr.
Non-Western or Third World Studies	3 Cr.
Social Analysis (Note 3)	3 Cr.
Natural Science	4 Cr.
Behavioral Science (Note 1)	3 Cr.
Liberal Arts Electives (Note 2)	9 Cr.
Total	49 Cr.
Total General Education	61 Cr.

Notes:

- Behavioral sciences include psychology, sociology and anthropology. Either Psychology 51 or Psychology 52 must be included in the general education portion of the curriculum.
- Students must include a third course in economics chosen from courses 120 to 139 either as a liberal arts elective or as an elective in the major. Students majoring in Business Economics automatically meet the third economics course requirement.
- Economics courses may not be used to fulfill the Social Analysis requirement.
- No more than four credits combined from applied music, ensemble music, and Physical Education 1-49 may be applied toward a degree.

Business Core

Sophomore (Lower Division) Courses:

GLM 50	3 Cr.
GLM 62	3 Cr.
ACC 52	4 Cr.
ACC 55	3 Cr.
Total	13 Cr.

Junior/Senior (Upper Division) Courses:

FNM 101	4 Cr.
GLM 101	4 Cr.
MKM 101	4 Cr.
POM 101	4 Cr.
HRM 140	4 Cr.
GLM 195	4 Cr.
Total	24 Cr.
Total Business Core	37 Cr.

Major Requirements

ACC 102	3 Cr.
ACC 104	4 Cr.
ACC 105	3 Cr.
ACC 152	4 Cr.
ACC 163	4 Cr.
ACC 177	3 Cr.
ACC 189	3 Cr.
GLM 167	3 Cr.
Total	27 Cr.

Accounting Major Options:

- Substitute ACC 188 for ACC 189.
- Substitute POM 152 for ACC 177.
- Substitute FNM 161 for GLM 167.
- Select Economics 124 as the third course requirement in economics.

Free electives (Note 4)	6 Cr.
Grand Total	131 Cr.

BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION

The major in business administration is for students interested in general management or business economics. Major options are available for those students planning careers in marketing, finance or personnel.

General Education

Freshman Studies

Theology 5	3 Cr.
English 5	3 Cr.
History 5	3 Cr.
Freshman Seminar 5	3 Cr.
Total	12 Cr.

Academic Area Studies

Theology Level II and Level III	6 Cr.
English 25	4 Cr.
Mathematics 51	4 Cr.
Mathematics 52	4 Cr.
Economics 71-72	6 Cr.
Computer Science 17	3 Cr.
Non-Western or Third World Studies	3 Cr.
Social Analysis (Note 3)	3 Cr.
Natural Science	4 Cr.
Behavioral Science (Note 1)	3 Cr.
Liberal Arts Electives (Note 2)	12 Cr.
Total	52 Cr.
Total General Education	64 Cr.

Notes:

- Behavioral sciences include psychology, sociology and anthropology. Either Psychology 51 or Psychology 52 must be included in the general education portion of the curriculum.
- Students must include a third course in economics chosen from courses 120 to 139 either as a liberal arts elective or as an elective in the major. Students majoring in Business Economics automatically meet the third economics course requirement.
- Economics courses may not be used to fulfill the Social Analysis requirement.
- No more than four credits combined from applied music, ensemble music, and Physical Education 1-49 may be applied toward a degree.

BUSINESS CORE

See Business Core under Major in Accounting . 37 Cr.

Major Requirements

(See options below.) Five or six courses selected from among the following, with no more than two courses per area:

1. Marketing courses, MKM	0-6 Cr.
2. Finance courses, FNM	0-6 Cr.
3. Human Resource Management courses, HRM	0-6 Cr.
4. POM 152	0-3 Cr.
Total	15-18 Cr.
Free electives (Note 4)	6-9 Cr.
Grand Total	125 Cr.

OR**Major Option Requirements**

Select one option: Marketing Management, Financial Management or Human Resource Management.

Marketing Management

MKM 133	3 Cr.
MKM 134	3 Cr.
MKM 135	3 Cr.
MKM 137	3 Cr.
Total	12 Cr.

Select one course each from any two of the following:

1. Finance courses, FNM	3
2. Human Resource Management courses, HRM	3
3. Accounting courses, ACC	3
4. Economics 120-130 series	3
5. General Management courses, GLM	3
6. Production-Operations Management courses, POM	3
Total	6 Cr.
Total	18 Cr.
Free electives (Note 4)	6 Cr.

OR**Financial Management**

FNM 161	3 Cr.
FNM 163	3 Cr.
FNM 165	3 Cr.
FNM 167	3 Cr.
Total	12 Cr.

Select one course each from any two of the following:

1. Marketing courses, MKM	3
2. Human Resource Management courses, HRM	3
3. Accounting courses, ACC	3
4. Economics 120-130 series	3
5. General Management courses, GLM	3
6. Production-Operations Management courses, POM	3
Total	6 Cr.
Total	18 Cr.
Free electives (Note 4)	6 Cr.

OR**Human Resource Management**

HRM 141	3 Cr.
HRM 142	3 Cr.
HRM 143	3 Cr.
HRM 147	3 Cr.
Total	12 Cr.

Select one course from any two of the following:

1. Marketing courses, MKM	3
2. Finance courses, FNM	3
3. Accounting courses, ACC	3
4. Economics 120-130 series	3
5. General Management courses, GLM	3
6. Production-Operations Management courses, POM	3
Total	6 Cr.
Free electives (Note 4)	6 Cr.

MAJOR IN BUSINESS ECONOMICS**General Education:** See General

Education requirements under Bachelor of Science in Business Administration. 64 Cr.

Business Core: See BusinessCore under Bachelor of Science in Accounting 37 Cr.
See **Notes** under Bachelor of Science in Accounting.**Major Requirements**

Economics 122	3 Cr.
Economics 123	3 Cr.
Economics 124	3 Cr.
Economics 126	3 Cr.
Economics 130 or 131	3 Cr.
Economics 145	3 Cr.
Total	18 Cr.
Free electives (Note 4)	6 Cr.
Grand Total Required	125 Cr.

ACCOUNTING**ACC 52. Financial Accounting.***

Cr. 4. A study of basic accounting theory and practice, the nature of assets and equity, income measurement, financial statement preparation. Prerequisite: sophomore standing.

ACC 55. Managerial Accounting.

Cr. 3. Emphasis on the internal use and analysis of accounting data by management. Introduction to budgeting, cost behavior, accounting systems, cost-volume-profit relationships and pricing decisions. Prerequisite: Accounting 52.

ACC 102. Intermediate Financial Accounting I.

Cr. 3. An intensive study of accounting theory related to assets and their inter-relationship with income measurement. Emphasis is on applicable AICPA Opinions and FASB Statements and Interpretations. Prerequisite: Accounting 55.

ACC 104. Intermediate Financial Accounting II.

Cr. 4. A continuation of Accounting 102 with concentration on liabilities, capital structure, income determination and changes in financial position. Emphasis is on applicable AICPA Opinions and FASB Statements and Interpretations and new accounting releases. Prerequisite: Accounting 102.

*Credit for Accounting 52 may be earned through the College Level Examination Program subject examination in Introductory Accounting.

ACC 105. Cost Accounting and Production Control.

Cr. 3. Cost accounting theory and practice: job order, process and standard cost systems including the study of production operations. Prerequisite: Accounting 55.

ACC 127. Accounting for Not-For-Profit Organizations.

Cr. 3. A study of accounting and financial reporting for non-profit organizations including governmental, university, hospital, social welfare and other applicable organizations. Prerequisite: Accounting 52.

ACC 152. Advanced Accounting.

Cr. 4. Accounting problems in business acquisitions, consolidated statements, diversified companies, interim reporting and partnerships. The primary emphasis is on financial reporting problems. Prerequisite: Accounting 104.

ACC 163. Federal Income Tax Accounting.

Cr. 4. Concepts of taxation and taxable income. Interpretation and application of present tax laws as they pertain to individual taxpayers, corporations, partnerships, estates and trusts. Prerequisites: Accounting 52 and senior standing.

ACC 177. Accounting Information Systems.

Cr. 3. Analyzing, designing and evaluating computer-based and manual accounting information systems. Prerequisites: Accounting 55 and Computer Science 17.

ACC 185. Internship in Accounting.

Cr. 3. A supervised work assignment for students with special interest in accounting. Students must meet eligibility requirements as established by accounting faculty. S/U grade. Prerequisite: senior standing.

ACC 188. Operational Auditing.

Cr. 3. The detailed study of audit processes used to measure and evaluate the economy, efficiency and effectiveness of managerial controls. Prerequisites: Accounting 102 and 105.

ACC 189. Auditing.

Cr. 3. A study of auditing principles with primary emphasis on the independent public accountant's attest function. Audit goals, working papers and problems of legal liability are covered. Prerequisite: senior standing.

ACC 195. Accounting Problems.

Cr. 3. An intensive study of accounting problems related to assets, liabilities, capital structure and income measurement. Prerequisites: Accounting 152 and senior standing.

ACC 196. Independent Study.

Cr. 1-3. An independent research effort. It requires approval of a research proposal by the student's adviser and the Dean of the College before registration is allowed. May not be used as a substitute for a course which covers the proposed research area. Prerequisite: approved research proposal and permission of the Dean.

MARKETING MANAGEMENT

MKM 101. Marketing Management.

Cr. 4. Emphasis is placed on the application of marketing concepts, theories and principles which relate to product policy, promotional mix decisions, distribution and logistical planning and pricing. The international business environment, including social, cultural, economic, political-legal, competitive and technological variables, is studied and compared with American markets. The areas of buyer analysis, the utilization of marketing information systems, and market planning and analysis are also stressed. Prerequisite: designated lower division courses.

MKM 133. Sales Management.

Cr. 3. A study of the managerial functions of sales managers with the emphasis on field and territorial management, recruitment and training of the sales force. Sales forecasting techniques, routing, variance analysis and personal selling principles are also included. Prerequisites: MKM 101 and its prerequisites.

MKM 134. Marketing Research.

Cr. 3. Six major areas comprise this course:

1. The design of a marketing information system and a review of the overall research process.
2. A determination of sources of information and research design.
3. A review of methods of collecting data and the design of data collection forms.
4. Sample design and data collection procedures.
5. Statistical analysis and interpretation of the data.
6. Compiling the research report.

Prerequisites: MKM 101 and its prerequisites.

MKM 135. Buyer Behavior.

Cr. 3. An analysis of the psychological, social and economic influences which affect attitude formation and decision-making processes of organizational, household and industrial buyers. An overview of the research methods used for determining characteristics of buyers is included. Prerequisites: MKM 101 and its prerequisites.

MKM 137. Marketing Policies.

Cr. 3. Capstone marketing course primarily for students seeking a major option in Marketing. It is taught from a marketing management perspective involving case analysis of product policy pricing, distribution and promotional mix. Prerequisite: senior standing in the College.

MKM 185. Internship in Marketing.

Cr. 3. An opportunity to work under a carefully planned and approved program for an academic semester with a sponsoring firm or organization. Student projects are defined by the sponsor and approved by the College of Business Administration's Internship Coordinator(s). A term paper and an oral presentation are required. S/U grade. Offered each semester. Prerequisites: junior core, senior class standing and the advice and consent of the instructor/Coordinator(s).

FINANCIAL MANAGEMENT**FNM 101. Financial Management.**

Cr. 4. This course is the opening specialized course in the field of financial management. It surveys the fundamentals of financial management from the viewpoint of the chief financial officer. Major topics are current asset management, risk management and aversion, financial leverage and analysis, capital budgeting, long-term financing, capital markets, cost of capital, mergers, failures and reorganization, and international finance. Prerequisites: designated lower division courses.

FNM 161. Financial Management Theory.

Cr. 3. This is an intermediate level finance course that emphasizes the underlying theories on which current financial techniques are based. The course analyzes the contributions of major authors to finance theory. It further studies applications of these theories to contemporary usages such as return measurement, risk measurement, capital structure, capital asset analysis and dividend policy. Prerequisites: FNM 101 and its prerequisites.

FNM 163. Investment Management.

Cr. 3. Analysis and classification of various investments such as common stocks, bonds, preferred stocks, options, convertibles, warrants, etc. Security Market operations, principles of analyzing securities (e.g., the risk and return characteristics of various investments) are analyzed. Investment strategies and policy are discussed, as are Investment Institution Media, informational aids and management of portfolios of institutional investors. Prerequisite: FNM 101 and its prerequisites.

FNM 165. Management of Financial Institutions.

Cr. 3. A study of the management of various types of financial institutions such as commercial banks, insurance companies, savings and loan associations, credit unions and investment bankers. General management problems and policies of these institutions as well as asset and liability management are covered. Prerequisite: FNM 101 and its prerequisites.

FNM 167. Financial Strategy and Policy.

Cr. 3. An analysis of the financial strategy of the firm in regard to investment in long-term assets and long-term sources of financing and management of equity. Evaluation of the risk and return of various financial strategies and policies is emphasized. Prerequisites: FNM 101 and its prerequisites, plus senior standing in the College of Business Administration.

FNM 185. Internship in Finance.

Cr. 3. See course description under MKM 185.

HUMAN RESOURCE MANAGEMENT**HRM 140. Organizational Behavior.**

Cr. 4. A study of individual and group behavior within organizational settings. Major topic areas include the psychological determinants of work behavior; power, politics and leadership; decision making; stress and conflict management; and techniques for managing work behavior. The theoretical bases are

covered as well as the implications for management practice. Activities and exercises are included so students can experience some of these organizational phenomena and can develop insights into their own organizational behaviors. Prerequisites: GLM 101 (may be taken concurrently), Psychology 51 or 52, and designated lower division courses.

HRM 141. Organizational Design.

Cr. 3. A study of organizational theory and change, with emphasis on organizational concepts such as environment, structure, technology and size as related to organizational effectiveness. It includes the current theoretical bases and implications for management of such characteristics and processes. Prerequisite: HRM 140.

HRM 142. Human Resource Practices I.

Cr. 3. An introduction to the areas of activity common to the field of personnel management, including human resource planning, job analysis, recruitment, selection, orientation and career development. Continued in HRM 143. Prerequisites: GLM 101 and HRM 140 (may be taken concurrently).

HRM 143. Human Resource Practices II.

Cr. 3. A continuation of the coverage of the areas of activity common to the field of personnel management, including compensation, health and safety, performance appraisal and discipline, training and development, and labor-management relations. Prerequisites: GLM 101 and HRM 140 (may be taken concurrently).

HRM 146. Managerial Interpersonal Competencies.

Cr. 3. A practice-oriented course allowing students opportunities to test and develop interpersonal competencies in managerial roles and settings. Prerequisites: HRM 140 and senior standing in the College of Business Administration.

HRM 147. Human Resource Management.

Cr. 3. An integrating course primarily for seniors working toward a major in Human Resource Management. Case studies and other activities are used to integrate the theoretical bases (HRM 140 and 141) with the various practices (HRM 142 and 143). Prerequisites: HRM 140 and two of the following courses: HRM 141, HRM 142, HRM 143, and senior standing in the College of Business Administration.

HRM 185. Internship in Human Resource Management.

Cr. 3. See course description under MKM 185.

PRODUCTION-OPERATIONS MANAGEMENT**POM 101. Production-Operations Management.**

Cr. 4. A study of the various forms the production process takes and the corresponding requirements placed upon management. Topics discussed include inventory management, workforce management and production planning and control. It includes the use of management science techniques in the production decision-making process. Prerequisite: designated lower division courses.

POM 152. Management Information Systems.

Cr. 3. Study of the concepts and application of information systems to managerial decision making. It includes topics such as systems theory, data base concepts, data analysis and management, managerial interfaces and control. Prerequisites: POM 101 and Computer Science 17.

GENERAL MANAGEMENT

GLM 50. Statistics.*

Cr. 3. A course in the elements of statistical inference and the application of statistical methods to business problems. Content includes descriptive statistics, probability theory and probability distributions, tests of hypotheses, nonparametric statistics, analysis of variance and regression and correlation. Prerequisite: Mathematics 51 and 52.

GLM 62. Legal Environment of Business.

Cr. 3. A study of the legal and regulatory climate that has a major impact on the operation of business entities.

GLM 101. Management of Organizations.

Cr. 4. A study of various business enterprises. The course is designed to broaden students' perspectives about managerial activities within organizations and relative to the larger society. Special emphasis is placed on managerial decision making regarding the direction, operation and control of political, social and economic environments in both the national and international settings. Prerequisite: designated lower division courses.

GLM 111. Small Business Management and Entrepreneurship.

Cr. 3. The study and the applications of the essential managerial factors of various types of small business, including organizational, environmental and personal factors. It includes exposure to sources of information and assistance for the small business person. Prerequisites: GLM 101, MKM 101 and FNM 101.

GLM 112. Small Business Institute.

Cr. 3. Practicum in which the student participates as a member of a team of student consultants on actual small business cases referred by the Small Business Administration. Enrollment is limited by the number of cases referred by the SBA. All consultant activities are performed by the students, under general supervision of the faculty coordinator. Prerequisite: approval of the SBI Coordinator.

GLM 127. Ethics in Business.

Cr. 3. An analysis of the moral bases for ethical decisions and behavior's ethical aspects in business leadership. Contemporary business conduct is examined in an ethical context. Prerequisite: senior standing.

GLM 167. Business Law.

Cr. 3. A study of various areas of law that affect the commercial community. The scope of

this course includes the law of contracts, sales, commercial paper, agency and property. This course emphasizes the provisions of the Uniform Commercial Code regarding sales contracts, transfer of titles, warranties, duties, liabilities, rights and the remedies of the parties. Prerequisite: GLM 62.

GLM 169. Business Law: Topics.

Cr. 3. Special topics relevant to business law. Designed to meet the needs of business students for the study of topics of current interest in law. Prerequisite: GLM 167.

GLM 185. Internship in Management.

Cr. 3. See course description under MKM 185.

GLM 193. Topics in Management.

Cr. 3. Detailed examination of selected topics pertinent to the field of management. To be offered when sufficient interest and staffing are available. Prerequisites: senior standing in the College and permission of the Dean.

GLM 195. Business Policy and Social Issues.

Cr. 4. Capstone business course. The development of the administrative perspective on management, including establishing and analyzing policy and strategy in various settings, as well as the relationships between administrative decision making and important social issues. Case method and computer simulation are used. Prerequisites: senior standing in the College and completion of the CBA core.

GLM 196. Independent Study.

Cr. 1-3. An independent research effort. It requires approval of a research proposal by the student's adviser and the Dean of the College before registration is allowed. May not be used as a substitute for a course which covers the proposed research area. Prerequisites: approved research proposal and permission of the Dean.

BUSINESS SERVICE COURSES

The courses numbered 100 listed below do not apply toward the Bachelor of Science in Accounting or the Bachelor of Science in Business Administration degrees.

BUSF 100. Principles of Finance.**

Cr. 3. A survey of the principles of finance from the viewpoint of the organization's management, whether for profit or not for profit. The course covers current and fixed asset management, sources of long- and short-term financing, money and capital markets, failure, reorganization and business combinations. Prerequisites: junior standing, ACC 52 and Economics 71 or 72.

BUSG 100. Principles of Management.**

Cr. 3. An introductory course in the practice and study of management which covers the various activities and approaches of the manager, the organization as the setting of management, and the skills and demands of the

*Credit for GLM 50 may be earned through the College Level Examination Program subject examination in Statistics.

**Credit for BUSF 100, BUSG 100, and BUSM 100 may be earned through the College Level Examination Program subject examinations in Principles of Finance, Principles of Management, and Principles of Marketing.

manager as an individual. Prerequisite: junior standing.

BUSM 100. Principles of Marketing.**

Cr. 3. An introductory course surveying the marketing of goods and services as viewed through the role of the marketing manager. Emphasis is on the major elements of the marketing mix: price, promotion, products and distribution. Prerequisite: junior standing.

MKM 131. Retailing.

Cr. 3. A study of the contemporary environment of the retailing industry with emphasis on techniques utilized in store location, merchandising, promotion and control. Prerequisites: junior standing and BUSM 100 or MKM 101.

MKM 132. Advertising.

Cr. 3. An introductory level course taught from a marketing perspective. The areas of market analysis, campaign planning and strategy, media selection and design of advertisements are emphasized. The legal environment of advertising and the role of the different service institutions, such as advertising agencies, are also covered. Prerequisites: junior standing and BUSM 100 or MKM 101.

BUSINESS ECONOMICS

The following courses, except for 130 and 131, which constitute an either/or choice, are the required courses from the Economics Department for the Business Economics major. Elective courses for this major may be drawn from the College of Arts and Sciences listings on pages 60-61.

122. Intermediate Macro-Economic Theory.

Cr. 3. A critical examination of theories of national income determination and techniques for measuring and analyzing aggregate economic activity. Prerequisites: Economics 71 and 72.

123. Economic Fluctuations and Forecasting.

Cr. 3. Techniques of forecasting utilizing national income and financial market statistics. Use of trend analysis techniques, multiple regression and economic model building. Emphasis is on applications of macroeconomics to both government and business policy making over time. Prerequisites: Economics 71 and 72 and GLM 50.

124. Managerial Economics.

Cr. 3. A course in applied economics which emphasizes the use of microeconomics, statistics, and decision theory in the process of making managerial decisions. Using problems and short case studies, topics such as estimating demand, cost and profit analysis, forecasting, capital budgeting and location analysis are discussed. Prerequisites: Economics 71 and 72 and GLM 50 or the equivalent.

126. International Economics.

Cr. 3. A study of the basis for the gains from international trade, including the effects of growth and development on a nation's welfare. Attention is also given to the effects of tariffs and other restrictions to trade. Balance of payments accounting, foreign exchange markets and international monetary institutions are covered during the last part of the course. Prerequisites: Economics 71 and 72.

130. Industrial Organization.

Cr. 3. The analysis of the economic factors underlying the structure, conduct and performance of American industry. Prerequisites: Economics 71 and 72.

131. Government Regulation of Business.

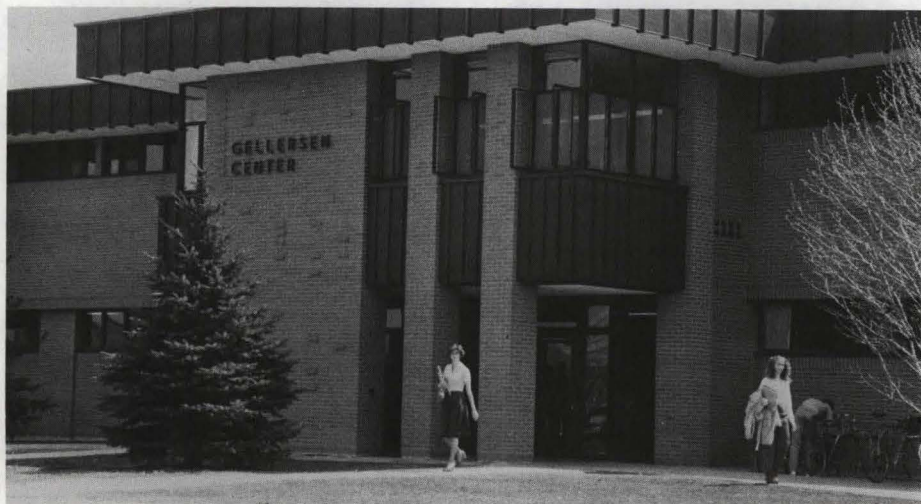
Cr. 3. A survey of government regulations of private business, monopoly and unfair competition, with emphasis on health and safety regulations, consumer and environmental protection. Utilizing basic economic analysis, attention is given to how regulation affects individuals and firms, the costs and benefits to society of regulation and the alternatives to the present approaches to regulation. Prerequisites: Economics 71 and 72.

145. Econometrics.

Cr. 3. The application of mathematical and statistical techniques to the analysis of economic problems. This includes the study of nonparametric statistical tests, single and multiple regression models and computer applications. Prerequisites: Economics 71 and 72, Mathematics 36 or 52 or 72 and GLM 50 or equivalent.

**Credit for BUSF 100, BUSG 100, and BUSM 100 may be earned through the College Level Examination Program subject examinations in Principles of Finance, Principles of Management, and Principles of Marketing.

COLLEGE OF ENGINEERING



Gellersen Center

Stuart G. Walesh, P.E., Ph.D., Dean

General Information. As early as 1873 civil engineering was taught at Valparaiso University. Full four-year programs were established in 1920, with offerings in Civil, Electrical and Mechanical Engineering. During World War II, with the shortage of male students, the program was temporarily reduced to two years at Valparaiso University followed by two years at Purdue University.

After the war, four-year engineering programs were reinstated on campus through the initiative of students who collected funds and then designed and built a new engineering laboratory building. The first post World War II degrees were offered in 1951 in Civil, Electrical and Mechanical Engineering.

In 1968 the College of Engineering moved to the newly-constructed Gellersen Center. This facility was provided through the generosity of the late William A. Gellersen of Oakland, California. The building, located on the eastern edge of the 310 acre campus, contains faculty

offices, classrooms and laboratories of the College of Engineering.

A cooperative education program was initiated in 1983 and the first group of cooperative education students graduated in 1986. The first computer engineering degrees were also awarded in 1986.

Location. The University's location provides good opportunities for contact with industrial and consulting firms and government agencies. The campus is forty-four miles southeast of Chicago and is located in the Calumet and St. Joseph Valley industrial region. This location allows students and faculty to visit engineering organizations and to participate in numerous professional meetings sponsored by engineering societies in the area.

Educational Objectives. Recognizing the responsibility to offer programs which are strong professionally, the College of Engineering has developed curricula which blend the liberal arts and communication skills with required engineering course

work. The College, as an integral part of the University, encourages its students to be involved in all phases of University life. Social, moral and ethical issues are given a place of high importance. This philosophy is consistent with the University's objective of inculcating Christian ethics. Such a perspective can only be achieved by full participation in the academic, social, cultural and spiritual life of a Christian campus.

College Organization.

Administratively, the College is an instructional unit under the direction of the Dean of Engineering. The individual programs in Civil Engineering, Computer Engineering, Electrical Engineering, and Mechanical Engineering are directed by the faculties of three engineering departments. Department chairs are responsible for leadership as well as for advisement of students in the departmental programs. Throughout the College, emphasis is placed on offering high quality undergraduate programs.

Academic Program. The programs of the College prepare students for direct entry into the engineering profession or for graduate school. Programs are designed to provide students with a general background in mathematics, the physical sciences and engineering sciences during the first three semesters. The last five semesters provide breadth and depth of study in a chosen field of specialization. Some students may choose to augment their studies through the experience-based program in cooperative education or through a semester of overseas studies. During the last two years of study, students may elect courses oriented toward specific future goals such as: graduate study, immediate job-entry upon graduation, or some other personal objective.

All degree programs contain extensive laboratory work which demonstrates practical application of theory and reinforces understanding of topics presented in the classroom.

Approximately one-fourth of the Engineering curriculum includes non-technical studies such as freshman seminar, theology, literature, English composition, history, and electives in social science and humanities. The academic program and involvement in

campus life help students to mature socially, spiritually, and professionally.

Independent Design Project. All students, with the exception of some cooperative education students, are required to complete a major independent study project under the supervision of a faculty adviser. These projects focus on the investigation of engineering problems and emphasize oral and written communication skills. Many of the projects are both suggested and sponsored by industrial and consulting firms. Special research interests of the faculty, or of the students, are also considered as sources of project topics.

Computer Facility. Engineering students use the computing facilities provided by the Academic Computer Center located in a newly constructed facility adjacent to the Gellersen Center. A Data General MV/8000 time-shared computer provides a major resource for engineering students. The MV/8000 is accessible through terminals located at various points on the campus as well as through student-owned personal computers via telephone links. Ten Hewlett Packard, stand-alone computer graphics workstations are also located in the computer center. These graphic computers are available for computer-aided design and computer-aided engineering.

Personal Computers. Extensive use of professionally oriented personal computers and concomitant software is planned for students in the Electrical Engineering and Computer Engineering programs beginning with the second semester Sophomores as of January 1987. Daily class assignments will involve use of microcomputers in many courses. Therefore, Electrical Engineering and Computer Engineering majors are urged to acquire a personal computer for use in their place of residence. Details regarding the type of computer workstation recommended by the College of Engineering may be obtained from the office of the Dean of Engineering.

Student Organizations. To heighten student interest in the profession of engineering and in activities of the student body of the College of Engineering, the Valparaiso University Engineering Society (VUES) provides general interest programs

for all engineering students and sponsors social and recreational activities for the College. Upon selecting a major, students are encouraged to join one of the student chapters of the related professional societies. The American Society of Civil Engineers, the Institute of Electrical and Electronic Engineers, and the American Society of Mechanical Engineers all have active student chapters on campus.

Tau Beta Pi. Junior and senior students who have distinguished themselves by high scholarship, exemplary character, unselfish activity, and breadth of interest in their profession may be elected to membership in Tau Beta Pi. The Indiana Delta Chapter of this national engineering honorary society was installed at Valparaiso University on March 23, 1963.

Professional Registration.

Registration of those who wish to practice professional engineering is required by law in each of the states and the District of Columbia. The purpose of the law is to assure the general public that those professing to practice engineering have been examined and accepted by a State Board of Examiners. The Engineer-in-Training (EIT) examination is held for students in their senior year each spring at Valparaiso University.

Career Placement. The Office of Placement and Career Planning arranges on-campus interviews with a variety of employers who are interested in hiring graduates. Help is available to assist those seeking to interview firms who do not interview on campus. Assistance is also provided for those wishing to find cooperative education positions, summer employment, or part-time employment during the school year. The Placement Office career resource library provides information on employment opportunities throughout the United States.

Accreditation. The Bachelor of Science degree programs in Civil Engineering, Electrical Engineering and Mechanical Engineering are accredited by the Accreditation Board for Engineering and Technology. The newer Computer Engineering program will be submitted for review during the next ABET inspection.

SPECIAL PROGRAMS OF THE COLLEGE OF ENGINEERING

Cooperative Education. Cooperative education provides a special program for career development which integrates classroom theory with career-related work experience. Employment in a salaried position allows students to gain valuable experience, to test career interests and to apply classroom knowledge in an environment related to their professional degree areas. The Co-op student acquires engineering experience through a planned and supervised training program which provides alternating periods of campus study and full-time off-campus employment. The initial work assignment normally starts during the summer between the sophomore and junior years and lengthens the study plan to five years. Academic credit may be earned for each work period. Students typically complete between two to five work sessions with the same employer. The Co-op Program enhances the graduating engineer's placement status and some businesses count the time served as a Co-op student toward fringe benefits provided to their employees.

Interdisciplinary Studies. Programs can be arranged to meet special needs or interests of students studying engineering at Valparaiso University. Students interested in career fields such as nuclear, electromechanical, bio-medical or chemical engineering or medicine can enrich their engineering programs by careful selection of technical and free electives. These programs involve replacing technical and free electives with courses from other disciplines. Each student plans a program of studies in consultation with a faculty adviser and must secure approval of the Dean of the College. Upon graduation the student receives a Bachelor of Science degree in Civil, Computer, Electrical or Mechanical Engineering.

Students who have an interest in nuclear engineering may take advanced courses in nuclear science offered by the Department of Physics. The Department of Physics has excellent facilities and maintains a modern sub-critical nuclear reactor.

Student Advisement. Each first-year engineering student is assigned an academic adviser. This adviser assists the

student with program planning through the first three semesters of study. Upon selection of a specific engineering major, a new adviser is provided for that degree area.

Double Degree Program. Some students wish to obtain a Bachelor of Arts or Bachelor of Science degree in addition to their degree in engineering. In general, this will require an additional year of study. To earn two degrees, students must earn 168 credit hours and attain a grade point average of at least 2.00 as well as complete all other graduation requirements for each degree. Students desiring double degrees must have their schedules approved by the Deans of both colleges involved. Further information may be obtained from the Deans.

Majors and Minors. A student may earn a major or minor in other colleges of the university by satisfying course and credit requirements specified for a major or minor provided that no more than seven hours of specific courses required for the engineering program are used in fulfilling the requirements of the major or minor. The student will take more courses than are required for an engineering degree. The major or minor will be noted on the student's official academic record.

Honors College. Students invited to participate in the program of Christ College take all required Engineering courses as well as courses required in the honors program. The Christ College courses provide an enriched program in the humanities and satisfy general education requirements for the engineering program. Academic advisers are assigned for both the College of Engineering and Christ College.

THE ENGINEERING PROGRAMS

Mathematics Placement.

All students entering the engineering program are required to take the mathematics placement examination, unless they have prior college credit in calculus or have passed the Advanced Placement Examination. Admitted students may request to have their parents proctor the mathematics placement examination at

home prior to the fall semester. Those who do not take the examination in advance must take the exam during fall registration.

There are two acceptable paths which engineering students may take in fulfilling mathematics requirement. One path provides additional instruction in functions and trigonometry; this path consists of Mathematics 71, 72, 73, and 104. The second path includes Mathematics 75, 76, 77, and 104. Both sequences of courses provide proper preparation for the engineering curriculum and satisfy graduation requirements for the College of Engineering.

Admission Requirements. The requirements for admission of first year students to the College are listed on pages 171-172 of this general catalog.

Transfer Requirements. Academic work taken at other institutions is evaluated for advanced standing granted by the Registrar. The appropriate Departmental Chair then determines which credits apply toward the major. The transfer student may apply a maximum of three credit hours in theology from his or her advanced standing to the theology requirement. An engineering transfer student with more than 68 credit hours of advanced standing need only complete one theology course (3 Cr.) at Valparaiso University.

Graduation Requirements. In addition to the requirements set forth on pages 182-183 of this catalog, the student must complete one of the prescribed Engineering curricula. The curriculum for each degree is composed of a group of courses common to the degree programs offered by the College and a group of courses that make up the specialized studies in a selected program. Each program requires a total of 138 credit hours. An exception is made for those taking the Mathematics 75, 76, 77 and 104 sequence, who graduate with 136 credit hours. The common courses required for all programs are listed below and the additional courses required for each specific program are found in the departmental listings.

CORE COURSES COMMON TO ALL UNDERGRADUATE ENGINEERING PROGRAMS

GE 14 Engineering Graphics	3 Cr.
GE 20 Algorithms for Computing	3 Cr.
GE 70 Energy Systems	3 Cr.
GE 90 Mechanics-Statics	3 Cr.
GE 94 Mechanics-Dynamics	3 Cr.
GE 95 Electricity and Magnetism	4 Cr.
GE 97 Engineering Science	4 Cr.
Chemistry 51E General Chemistry	4 Cr.
Chemistry 52E General Chemistry	3 Cr.
Freshman Seminar 5	3 Cr.
English 5 Exposition and Argument	3 Cr.
English 25 Literary Studies	4 Cr.
History 5	3 Cr.
Western Thought and Society	
Theology 5	3 Cr.
Introductory Christian Theology	
Mathematics 71, 72, 73	14 Cr.
(or 75, 76, 77)	(12 Cr.)
Calculus	
Mathematics 104	4 Cr.
Differential Equations and Linear Algebra	
Theology Elective, Level II or III*	3 Cr.
Humanities or Social Science Elective**	3 Cr.
Total	68 or 70 Cr.

SUGGESTED LOWER DIVISION SEQUENCE

The suggested sequence of courses for the first three semesters of study is similar for all degree programs with the exception of two courses which will be delayed for those who plan to follow the Computer Engineering program and with the omission of the physical education requirement for those planning to major in Civil Engineering. The delayed courses, which are replaced by computer science courses, will be taken at a later point in the student's program. At the beginning of the fourth semester the student generally begins a program leading to one of the four professional degrees. For those who wish to defer their choice until the fifth semester, special schedules are arranged for the fourth semester to provide continuation without loss of progress. Suggested sequences leading to the various degrees are found in the departmental offerings. Adjustments to the common sequence are as indicated in parenthesis.

Freshman Year

First Semester	Cr.	Second Semester	Cr.
Mathematics 71	5	Mathematics 72	5
GE 14	3	GE 70	3
GE 20	3	(or CS 58)	
Fr. Seminar 5	3	GE 90	3
Theology 5	3	English 5	3
PE 1-5#	1	History 5	3
Total	18	PE 6-49#	1
		Total	18

Sophomore Year, Third Semester

	Cr.		Cr.
Mathematics 73	4	GE 94	3
Chemistry 51E	4	GE 95	4
Theology Elective			3
(or Computer Science 91)			
Total			18

GENERAL ENGINEERING**

GE 4. Elementary Graphics.

(Also offered as Home Economics 4.) 1+3.
Cr. 2. A course to acquaint the student with the graphic techniques of lettering and line work, scale drawing and size description, and orthographic projection. Emphasis is on architectural drawings. A survey of methods, practices and techniques of home construction is included. Not open to engineering students. Prerequisite: sophomore standing. Given in alternate years.

GE 14. Engineering Graphics.

1+4, Cr. 3. A course in the theory and techniques of engineering graphics. Emphasis is placed on theoretical geometric projections; lines and planes in space, orthographic projections, intersections and contours and oblique and perspective views. Use of computer graphics is included.

GE 20. Introduction to Algorithms for Computing.

Cr. 3. A fundamental course in algorithmic processes. Special emphasis is placed on the use of a time-shared computer system. Elementary applications in numerical analysis and data processing are studied. Students design algorithms and write programs for their implementation.

GE 70. Energy Systems.

Cr. 3. A basic course in energy and related principles of physics. The first law of thermodynamics is emphasized through the use of energy balances. The second law of thermodynamics is introduced. Properties of gases and vapors are studied using tables, charts, and the perfect gas equation. Heat power systems are analyzed.

Prerequisite: Mathematics 71 or 75.

GE 90. Mechanics—Statics.

Cr. 3. A course in the resolution and composition of forces and moments as applied to the free body diagram. Topics include principles of equilibrium, first and second moments of areas, study of trusses, frames and

*Defined on pages 127-129.

**Advisers have a list of approved courses.

#Not required of students majoring in Civil Engineering.

***See page 41 for the number of credit hours that may be applied toward a degree in the College of Arts and Sciences.

machines, friction. Prerequisite: Mathematics 71 or 75.

GE 94. Mechanics—Dynamics.

Cr. 3. A study of the motion of a particle and systems of particles in rectilinear, curvilinear and polar coordinates. The course includes motion of a rigid body in translation, rotation and general plane motion; forces involved in moving systems; use of work and energy relations; impulse and momentum, and periodic motion. Prerequisites: Mathematics 72 or 76 and GE 90.

GE 95. Electricity and Magnetism.

3+3, Cr. 4. A study of the definitions and properties of electric and magnetic force fields. The application of Kirchhoff's Laws to elementary DC and AC circuits is emphasized. Prerequisite: Mathematics 71 or 75.

GE 97. Engineering Science.

Cr. 4. An introduction to the mechanics of waves, and to the structure of atoms and their nuclei. Topics include the theory of waves, reflection, refraction, diffraction, polarization, special theory of relativity, wave-particle duality, atomic structure, nuclear structure, fission and fusion. Prerequisites: GE 94 and 95.

GE 187. Engineering Economics.

Cr. 2. The theory of economic decision making based on comparisons of worths of alternative courses of action with respect to cost. It includes time-value mechanics and depreciation methods. Prerequisite: junior standing in the College.

GE 190. Cooperative Education I.

Cr. 2. The application of theoretical and experimental engineering concepts in a business, consulting, industrial or government setting. Emphasis is placed on involvement in real world engineering projects requiring analysis, design and investigative skills. Requires satisfactory work performance at a pre-selected employer and the submission of a final report in approved form. Prerequisites: approval of the Cooperative Engineering Education Coordinator and the Department.

GE 191. Cooperative Education II.

Cr. 2. A continuation of GE 190. This course requires a satisfactory employer evaluation, a final report in approved form and an oral presentation before faculty and peers.

GE 192. Cooperative Education III.

Cr. 1. Application of the concepts of engineering in a business, consulting, industrial, or government environment. It requires a final report in approved form. May be repeated for up to three credit hours. Prerequisites: approval of the Cooperative Engineering Education Coordinator and the Department.

GE 195. Senior Problem.

Variable Cr. Selected students are permitted to work out a special problem in their particular field under the supervision of a member of the faculty. Each student is required to keep a progress notebook and to turn in a final report in approved form. Open only to students with acceptable senior standing upon permission of the faculty and approval of the Dean of the College.

Civil Engineering

Professors El-Naggar, Mortimer, Schueler, Seeley, Spring (Chair), Associate Professors Thompson, Walesh.

"Civil engineering is the profession in which a knowledge of the mathematical and physical sciences gained by study, experience and practice is applied with judgment to develop ways to utilize, economically, the materials and forces of nature for the progressive well-being of mankind in creating, improving and protecting the environment, in providing facilities for community living, industry and transportation, and in providing structures for the use of mankind."

—*American Society of Civil Engineers*

Civil engineers measure and map the earth's surface and utilize these maps to locate their projects. They design and supervise the construction of bridges, tunnels, buildings, dams and aqueducts. They build supporting foundations for these and other structures. Civil engineers plan, design, construct and maintain highways, railroads, canals and airports. They regulate rivers and control floods; build docks, pipelines, sea walls; develop harbors; design and build plants and systems to bring pure water to homes and factories; design and build systems for sewage and refuse disposal; drain swamps and irrigate arid areas. Civil engineering is truly a people-serving profession.

Civil Engineering Laboratories. The

Civil Engineering program at Valparaiso University is arranged to maintain proper balance between laboratory and classroom instruction. Over 5000 square feet of modern, well-equipped laboratory space is available in five laboratories for materials testing, fluid mechanics, concrete and soil mechanics, environmental engineering and experimental stress analysis. In addition, field exercises in surveying are conducted outdoors except in the case of unusually inclement weather. The laboratory experience is vital to the interpretation and application of classroom theory.

Graduation Requirements. In

addition to the courses common to each degree program listed on page 150, the following courses are required to earn the Bachelor of Science in Civil Engineering degree.

CE 100 Surveying	3 Cr.
CE 101 Statistical Applications in CE	3 Cr.
CE 103 Mechanics of Materials	3 Cr.
CE 106 Fluid Mechanics I	3 Cr.
CE 107 Fluid Mechanics II	3 Cr.
CE 109 Structural Analysis I	4 Cr.
CE 112 Materials Engineering	3 Cr.
CE 113 Water Resources Engineering	3 Cr.
CE 114 Engineering Management	3 Cr.
CE 115 Structural Analysis II	3 Cr.
CE 116 Structural Design I	4 Cr.
CE 117 Structural Design II	3 Cr.
CE 120 Soil Mechanics	3 Cr.
CE 122 Soil & Foundation Engineering	3 Cr.
CE 163 Transportation	3 Cr.
CE 164 Environmental Engineering I	3 Cr.
CE 165 Environmental Engineering II	3 Cr.
CE 190 Independent Study Project I	2 Cr.
CE 191 Independent Study Project II	2 Cr.
Economics 71 or 72	3 Cr.
Principles of Economics	
Communication 40	2 Cr.
Public Speaking	
Technical Electives	6 Cr.
Total	68 Cr.

Total credits required for graduation = 138

Technical Electives. The technical elective requirement may be met with Civil Engineering electives or courses from biology, chemistry, mathematics, computer science, physics or courses in other engineering departments. Courses used to fulfill this requirement must be upper division courses and must be approved by the Chair of the Civil Engineering Department.

Suggested Course Program. This suggested schedule of courses represents an orderly sequence for meeting degree requirements.

Sophomore Year, Fourth Semester.

Mathematics 104	4 Cr.
CE 100#	3 Cr.
CE 103	3 Cr.
GE 97	4 Cr.
Chemistry 52E	3 Cr.
Total	17 Cr.

Junior Year

<i>Fifth Semester</i>	<i>Cr.</i>	<i>Sixth Semester</i>	<i>Cr.</i>
CE 101	3	CE 107#	3
CE 106	3	CE 109	4
CE 112#	3	CE 116#	4
CE 120#	3	CE 122	3
CE 163	3	English 25	4
Communication 40	2	Total	18
Total	17		

Senior Year

<i>Seventh Semester</i>	<i>Cr.</i>	<i>Eighth Semester</i>	<i>Cr.</i>
CE 115	3	CE 113	3
CE 117	3	CE 114	3
CE 164#	3	CE 165	3
CE 190	2	CE 191	2
Economics 71 or 72	3	Technical Elective	3
Technical Elective	3	Humanities or	
Total	17	Social Science	3
Total	17		

CIVIL ENGINEERING***CE 100. Surveying.#**

2+3, Cr. 3. A study of the science and art of absolute and relative spatial measurements for engineering purposes. Special emphasis is placed on the theory of errors, use of surveying instruments, and field practice in transit-tape traversing, leveling and route surveying. Prerequisite: Mathematics 71 or 75.

CE 101. Statistical Applications in Civil Engineering.

Cr. 3. An introduction to the planned procurement, property description, analysis, and presentation of engineering data. A study of the continuous and discrete distributions most commonly encountered in engineering quality control, experimentation, and design. Emphasis is given to the Central Limit Theorem and its applicability in many areas of Civil Engineering, to the estimation of the sample size required to achieve desired levels of confidence in the conclusions reached by the engineer, to probabilistic methods used in experimental design and quality control, and to a variety of applications of probabilistic theories in engineering practice and research. Prerequisite: Mathematics 72 or 76.

CE 103. Mechanics of Materials.

Cr. 3. Concepts of stress and strain, stress-strain relationships, states of plane stress and strain at a point; elementary analysis of stress distributions and deformations for axial loading of prismatic members, torsional loading of circular shafts and bending of beams, combined loading; plastic and elastic action, and an introduction to statically indeterminate problems. Prerequisites: Mathematics 73 or 77 and GE 90.

CE 106. Fluid Mechanics I.

Cr. 3. An examination of fluid properties, fluids at rest, and fluids in motion. Conservation of mass, and the energy and momentum principles are utilized along with dimensional analysis and similitude. Applications include surface resistance, flow in conduits, lift and drag, and hydraulic model studies. Prerequisites: GE 70, GE 94, and Mathematics 73 or 77.

CE 107. Fluid Mechanics II.#

2+3, Cr. 3. A continuation of CE 106 with emphasis on laboratory observations, hydraulic machinery, pipe networks, uniform flow in open channels, and an introduction to surface and ground water hydrology. Prerequisite: CE 106 or ME 172.

#Courses with laboratory or 3-hour design period.

*See page 41 for the number of credit hours that may be applied toward a degree in the College of Arts and Sciences.

CE 109. Structural Analysis I.

Cr. 4. Analytical and graphical methods for the determination of axial, flexural, shearing and torsional stresses and their resulting deflections. Common structural forms of both determinate and indeterminate types, such as bridge and roof trusses, cable structures, beams and frames are treated. Influence line theory and energy methods are introduced. Prerequisite: CE 103.

CE 112. Materials Engineering.#

2+3, Cr. 3. A study of the mechanical properties of engineering materials and the relationship between their behavior and the design of structural and machine components. The macro- and micro-structure of materials are studied and the elementary concepts of failure including fracture, yielding and elastic instability are presented along with the classic theories of failure. Experimental investigations involving static yielding and fracture, fatigue, impact and creep are conducted in the laboratory. Prerequisite: CE 103 (may be taken concurrently).

CE 113. Water Resources Engineering.

Cr. 3. Application of the principles of fluid mechanics to analysis and design of water resources projects. Topics include open channel hydraulics, advanced closed conduit flow problems, economic analysis, dams, spillways, river navigation, flood control, and water law.

CE 114. Engineering Management.

Cr. 3. Application of the concepts of engineering economy to construction projects, using the case study approach. Investigation of construction management aspects, i.e., CPM, specifications, contracts and forms of organization of an engineering firm. Selected discussions relating to professionalism and professional ethics. Prerequisite: senior standing in the College of Engineering.

CE 115. Structural Analysis II.

Cr. 3. Analysis of statically indeterminate structures, using the approximate method, classical methods and contemporary methods. These include moment distribution, slope deflection, matrix methods, elastic center column analogy and digital computer approaches. Prerequisites: GE 20 and CE 109.

CE 116. Structural Design I.#

3+3, Cr. 4. The design of steel structural system components using elastic and plastic methods. Design of bolted and welded connections. Use of AISC and AASHTO codes in the design of steel buildings, plate girders and bridges. Field trips are required. Prerequisite: CE 109 (may be taken concurrently).

CE 117. Structural Design II.

Cr. 3. The analysis and design of reinforced concrete structural system components using the latest ACI strength design methods. Design includes flexural members, compression members, slabs and footings. Field trips are

required. Prerequisites: CE 109 and CE 115 (may be taken concurrently).

CE 118. Structural Design III.^C

2+2, Cr. 3. The analysis and design of timber and masonry structural system components. The use of building codes is stressed. Design projects are required. Prerequisite: CE 109.

CE 120. Soil Mechanics.#

2+3, Cr. 3. The study of index, structural, mechanical and hydraulic properties of soils. Soil compaction and stabilization. Theoretical soil mechanics, including shear strength, pressure distribution, consolidation, active and passive states of plastic equilibrium and flow-through permeable media. Elementary principles of laboratory identification and testing of soils. Fundamental properties of plain concrete and its components, including batch design. Prerequisites: CE 103, 106 and 112 (may be taken concurrently).

CE 122. Soil and Foundation Engineering.

Cr. 3. A continuation of CE 120. Further aspects of theoretical soil mechanics, including slope stability, lateral earth pressure and retaining walls, vertical pressure distribution and settlement, bearing capacity analysis and load capacity of individual piles and pile groups. Proportioning of shallow and deep foundations. Subsoil investigation techniques. Prerequisite: CE 120.

CE 163. Transportation.

Cr. 3. Study of the geometric design of transportation routes. Transportation planning. Topics include a survey of the application of engineering principles on the location, design and construction of water, rail and air transport; pipelines, belt conveyors and systems for the future; a study of public transportation modes. Prerequisites: GE 94 and CE 100.

CE 164. Environmental Engineering I.#

2+2, Cr. 3. Overview of the relationships between society and environmental quality. The impact of pollution on nature's resources. Topics considered in depth are: water supply and distribution; wastewater collection and disposal. The laboratory addresses chemical and bacteriological principles and analysis of water and wastewater. Application of laboratory results to treatment process control. Field trips are required. Prerequisite: CE 106 or ME 172.

CE 165. Environmental Engineering II.

2+2, Cr. 3. The understanding of environmental pollution and the need for mechanisms of control. In-depth study of the physical, chemical, and biological principles involved in water and wastewater treatment. Engineering process design of water and wastewater treatment facilities. Field trips are required. Prerequisite: CE 164 or consent of instructor.

CE 166. Air Pollution.^C

2+2, Cr. 3. History of the air pollution problem. A study of the types of pollutants and their effects on the environment. Investigation of the methodology for determining air quality criteria

#Courses with laboratory or 3-hour design period.

^CCourses which fulfill civil engineering elective requirements.

and standards, regulations and ordinances. Includes the discussion of plans for the implementation of air pollution control. Field trips are required. Taught in alternate years. Prerequisite: engineering junior or consent of instructor.

CE 167. Traffic Engineering.^c

Cr. 3. Fundamental traits and behavior of the road user. Vehicle characteristics, traffic speeds, volumes, stream flow; intersection operations; signing and marking; accidents and safety. Taught in alternate years. Prerequisite: CE 163 or consent of instructor.

CE 190. Independent Study Project I.

1+3, Cr. 2. The application of theoretical and experimental engineering concepts and mathematical principles in the analysis, design or investigation of an engineering system. Individual or group problems in the field of Civil Engineering are to be selected by the student with the approval of the Department of Civil Engineering faculty. Prerequisite: senior standing in Civil Engineering.

CE 191. Independent Study Project II.

1+3, Cr. 2. A continuation of the project selected in CE 190.

Electrical and Computer Engineering

Professors Dauberman, Gelopulos (Chair), Luecke, Vocke; Associate Professors Bohlmann, Goodman, Kraft; Assistant Professors Crosmer, Hart; Instructor Franck.

The Department of Electrical and Computer Engineering offers two degree programs: Computer Engineering and Electrical Engineering.

The Electrical Engineering program is designed to provide a variety of career opportunities in industries as diverse as aerospace, computers, manufacturing, communications and electrical power. It is based on required work in circuit theory, analog and digital electronics, linear system theory, structure of computers, electromagnetic field theory and electromechanical energy conversion. Elective courses allow emphasis in computers, communication, industrial power and control systems.

The Computer Engineering program combines study in basic engineering principles, computer science, and electric and electronic circuits and systems. Graduates from this program are prepared for career opportunities in fields where the hardware aspects of computer design and on-line control applications are of primary importance. With the continuing emergence of the digital computer as a central component in engineered systems, opportunities will continue to develop in industries not historically identified with the manufacture of computers.

Both programs offered by the Department contain a significant laboratory component. Emphasis is placed on developing skills in the design, construction and testing of circuits and systems. The laboratory course sequence is correlated with lecture courses which are taken concurrently. There are six primary laboratory facilities in the Department. The electrical circuits laboratory serves for basic instruction in electrical circuit concepts and use of instruments. Intermediate laboratory instruction takes place in the electronic systems laboratory which contains the necessary equipment to support class work related to third year studies. The computer laboratory is the main laboratory for the Computer Engineering program. It contains computers, development systems and peripherals which are separate from other campus computer facilities. Specialized laboratories in microwaves, automatic control and energy conversion are used to support fourth year course work. Senior projects use the facilities of the Department as required.

COMPUTER ENGINEERING

Graduation Requirements.

In addition to the courses common to each degree program listed on page 150, the following courses are required to earn the degree of Bachelor of Science in Computer Engineering.

^cCourses which fulfill civil engineering elective requirements.

ECE 81 Laboratory I	1 Cr.
ECE 85 Electronics	3 Cr.
ECE 89 Linear Circuits	3 Cr.
ECE 102 Laboratory II	1 Cr.
ECE 106 Computer Laboratory III	1 Cr.
ECE 107 Computer Laboratory IV	1 Cr.
ECE 110 Linear System Theory I	3 Cr.
ECE 111 Linear System Theory II	3 Cr.
ECE 120 Digital Design	3 Cr.
ECE 123	3 Cr.
Architecture of Computer Systems	
ECE 190 Independent Study Project I	2 Cr.
ECE 191 Independent Study Project II	2 Cr.
Computer Science 58	3 Cr.
Algorithms & PASCAL Programming II	
Computer Science 86	3 Cr.
Computer Architecture & Programming	
Computer Science 91	3 Cr.
File Structures & Algorithms	
Computer Science 116	3 Cr.
Organization of Programming Languages	
Mathematics 112	3 Cr.
Discrete Mathematical Structures	
Mathematics 54	4 Cr.
Statistical Analysis	
GE 187 Engineering Economics	2 Cr.
Physical Education 1-5	1 Cr.
Physical Education 6-49	1 Cr.
ECE or Computer Science Electives	14 Cr.
Social Analysis Elective*	3 Cr.
Free Elective	2 Cr.
Total	68 Cr.

Total credits required for graduation = 138

ECE or Computer Science Electives. Courses used to fulfill this requirement must be approved by the academic adviser.

Cooperative Education. Students may request the Department to substitute GE 190 and GE 191 co-op credit hours for ECE 190 and ECE 191 course requirements. Students placed after their junior year may request substitutions of GE 191 and two GE 192 credit hours for ECE 190 and ECE 191 requirements. Other co-op credit hours may be used to satisfy technical elective credit hours upon request.

Suggested Course Program. This suggested schedule of courses represents an orderly sequence for meeting degree requirements. Students with special situations may suggest an alternative course sequence in consultation with their academic adviser.

Sophomore Year, Fourth Semester.

Mathematics 104	4 Cr.
Chemistry 52E	3 Cr.
Computer Science 86	3 Cr.
ECE 81	1 Cr.
ECE 85	3 Cr.
ECE 89	3 Cr.
Total	17 Cr.

Junior Year

Fifth Semester	Cr.	Sixth Semester	Cr.
English 25	4	Theology Elective	3
GE 70	3	GE 97	4
CS 116	3	Math 112	3
ECE 102	1	ECE 106	1
ECE 110	3	ECE 111	3
ECE 120	3	ECE 123	3
Total	17	Total	17

Senior Year

Seventh Semester	Cr.	Eighth Semester	Cr.
Free Elective	3	Social Analysis	
Humanities or		Elective	3
Social Science	3	ECE or CS Electives	8
ECE or CS Electives	6	Math 145	3
GE 187	2	ECE 191	2
ECE 107	1	Total	16
ECE 190	2		
Total	17		

ELECTRICAL ENGINEERING

Graduation Requirements. In

addition to the courses common to each degree program listed on page 150, the following courses are required to earn the degree of Bachelor of Science in Electrical Engineering.

ECE 81 Laboratory I	1 Cr.
ECE 85 Electronics	3 Cr.
ECE 89 Linear Circuits	3 Cr.
ECE 102 Laboratory II	1 Cr.
ECE 103 Electrical Laboratory III	2 Cr.
ECE 104 Electrical Laboratory IV	1 Cr.
ECE 105 Electrical Laboratory V	1 Cr.
ECE 110 Linear System Theory I	3 Cr.
ECE 111 Linear System Theory II	3 Cr.
ECE 120 Digital System Design	3 Cr.
ECE 121 Computer Organization OR	3 Cr.
ECE 123 Architecture of Computer Systems	3 Cr.
ECE 131 Electromagnetic Field Theory	3 Cr.
ECE 138 Energy Conversion	3 Cr.
ECE 140 Analog System Design	3 Cr.
ECE 190 Independent Study Project I	2 Cr.
ECE 191 Independent Study Project II	2 Cr.
ECE 151, 160 or 175	3 Cr.
Design Elective	
ECE or Computer Science Electives	6 Cr.
ECE Elective	3 Cr.
GE 187 Engineering Economics	2 Cr.
Physical Education 1-5	1 Cr.
Physical Education 6-49	1 Cr.
Engineering Science Elective	3 Cr.
Technical Electives	6 Cr.
Free Elective	3 Cr.
Social Analysis Elective*	3 Cr.
Total	68 Cr.

Total credits required for graduation = 138

Program Areas. The Electrical

Engineering program has elective courses which allow a student to select from among three areas of electrical engineering practice. These are:

1. Computer Engineering
2. Electrical Communication Engineering

*Defined on page 30.

3. Industrial Power and Control Engineering

A total of 17 credit hours of electives is available for specializing in one of these areas. Specific recommendations are available from the Department of Electrical and Computer Engineering. Students who desire a more general program in electrical engineering may select their electives from among these areas of specialization. Because the Computer Engineering option requires that several computer science courses be taken during the second through fifth semesters, first year students who are interested in this area should follow the Computer Engineering program for the first two years. The adjustments to the program in the last two years should be made in consultation with the departmental academic adviser.

Technical Electives. The technical elective requirement may be met with additional Electrical and Computer Engineering electives or with courses from the following departments: Civil Engineering, Mechanical Engineering, Biology, Chemistry, Mathematics and Computer Science or Physics. Courses used to fulfill this requirement must be approved by the academic advisor.

Engineering Science Elective. The engineering science elective requirement may be met by taking one of the following courses: Civil Engineering 103 or 106 or Mechanical Engineering 170, 172 or 180.

Cooperative Education. Students may request the Department to substitute GE 190 and GE 191 co-op credit hours for ECE 190 and ECE 191 course requirements. Students placed after their junior year may request substitutions of GE 191 and two GE 192 credit hours for ECE 190 and ECE 191 requirements. Other co-op credit hours may be used to satisfy technical elective credit hours upon request.

Suggested Course Program. This suggested schedule of courses represents an orderly sequence for meeting degree requirements. For students with special situations, alternate suggested courses can be arranged in consultation with the departmental academic adviser.

Sophomore Year, Fourth Semester.

Mathematics 104	4 Cr.
Chemistry 52E	3 Cr.
English 25	4 Cr.
ECE 81	1 Cr.
ECE 85	3 Cr.
ECE 89	3 Cr.
Total	18 Cr.

Junior Year

Fifth Semester	Cr.	Sixth Semester	Cr.
GE 97	4	Social Analysis	3
ECE 102	1	ECE 103	2
ECE 110	3	ECE 111	3
ECE 120	3	ECE 121 or 123	3
ECE 140	3	ECE 131	3
Free Elective	3	Humanities or	
Total	17	Social Science	3
		Total	17

Senior Year

Seventh Semester	Cr.	Eighth Semester	Cr.
ECE 104	1	GE 187	2
ECE 138	3	ECE 105	1
ECE 190	2	ECE 191	2
Engineering Science		Technical Elective	3
Elective	3	ECE Electives	6
Technical Elective	3	Total	14
ECE Electives	6		
Total	18		

ELECTRICAL AND COMPUTER ENGINEERING*

ECE 21. Algorithms and PASCAL Programming II.

Cr. 3. (Also offered as Computer Science 58.) Emphasis on the development of structure and discipline in program design and style, especially for intermediate size programs. Prerequisite: GE 20.

ECE 80. Electronics and Scientific Instrumentation.

2+3, Cr. 3. (Also offered as Chemistry 80.) Electronic principles and devices are studied, with applications to scientific instrumentation. Laboratory experience with instruments is emphasized. Simple troubleshooting techniques are taught. Not open to engineering majors. Prerequisites: Physics 77 (may be taken concurrently) and sophomore standing. Offered every other year.

ECE 81. Laboratory I.

0+3, Cr. 1. Laboratory study of linear and electronic circuits. Prerequisite: GE 95.

ECE 85. Electronics.

Cr. 3. An introduction to semiconductor theory and the application of diodes, transistors and integrated circuits in the design of amplifiers and multiple transistor circuits. Prerequisite: GE 95.

ECE 89. Linear Circuits.

Cr. 3. A study of the fundamental methods and theorems of electric circuit analysis with emphasis on both analytical and computer-aided methods. Topics include steady state analysis of DC and AC circuits, transient and complete response of first and second order circuits, frequency domain analysis and coupled circuits. Prerequisite: GE 95.

*See page 41 for the number of credit hours that may be applied toward a degree in the College of Arts and Sciences.

ECE 96. Principles of Electrical Engineering.

3+3, Cr. 4. Principles and applications of electronic and electro-magnetic devices. Topics include basic rotating machines, transformers, semi-conductor circuits, logic circuits, microcomputers, amplifiers and instrumentation. Not open to Electrical Engineering or Computer Engineering majors. Prerequisite: GE 95.

ECE 102. Laboratory II.

0+3, Cr. 1. The study of analog and digital signals and signal processing circuits emphasizing measurement techniques. Prerequisites: ECE 85 and 89.

ECE 103. Electrical Laboratory III.

0+6, Cr. 2. An introduction to the design, construction and laboratory evaluation of analog and digital electronic systems. Prerequisite: junior standing in the ECE department.

ECE 104. Electrical Laboratory IV.

0+3, Cr. 1. Laboratory study and design projects in topics selected from senior year Electrical Engineering courses. Prerequisite: senior standing in the Electrical Engineering program.

ECE 105. Electrical Laboratory V.

0+3, Cr. 1. A continuation of Laboratory IV. Prerequisite: senior standing in the Electrical Engineering program.

ECE 106. Computer Laboratory III.

0+3, Cr. 1. Electrical measurements in computer systems. Study of computer subsystems. A/D and D/A converters, serial and parallel interfaces, memory systems. Prerequisite: ECE 81 and junior standing in the Computer Engineering program.

ECE 107. Computer Laboratory IV.

0+3, Cr. 1. Software development with assemblers and compilers for embedded systems. Prerequisite: ECE 106.

ECE 110. Linear System Theory I.

Cr. 3. An introduction to discrete linear time-invariant systems analysis using frequency response and linear transform techniques. Prerequisites: ECE 89 and Mathematics 104.

ECE 111. Linear System Theory II.

Cr. 3. A continuation of ECE 110 with emphasis on continuous systems and the digital representation of continuous systems. Topics include state space representation of linear systems and digital simulations. Prerequisite: ECE 110.

ECE 120. Digital System Design.

Cr. 3. (Also offered as Computer Science 87.) A logic design course covering inter-domain conversion, combinational and sequential logic, controller specification and design using MSI and LSI devices. Prerequisite: GE 95 or consent of the Chair of the Department.

ECE 121. Computer Organization.

Cr. 3. An introduction to the information transfers and transformations which take place in a digital computer. Topics include stored program concepts, data representations, common algorithms, instruction formats,

components and structure of computer systems. Prerequisite: ECE 120 or junior standing.

ECE 122. Computer Architecture and Programming.

Cr. 3. (Also offered as Computer Science 86.) Fundamentals of the structure of digital computers and an introduction to assembly language programming. Topics include machine instructions, data representation, addressing techniques and program segmentation and linkage. Prerequisite: ECE 21.

ECE 123. Architecture of Computer Systems.^{ec}

Cr. 3. The description, organization and design of computer elements to perform specific tasks effectively. Arithmetic and string processing machines and the influence of software on their structure. Prerequisite: Computer Science 86 or ECE 121.

ECE 131. Electromagnetic Field Theory.

Cr. 3. The study of fundamental laws of static and dynamic electric and magnetic fields using vector methods. Topics include boundary value problems, Maxwell's equations and electromagnetic radiation. Prerequisite: Mathematics 73 or 77.

ECE 138. Energy Conversion.

Cr. 3. A study of electromagnetic devices with emphasis on the principles and operating characteristics of transformers and rotating electrical machines. Prerequisite: ECE 89.

ECE 140. Analog System Design.

Cr. 3. The design of analog electronic systems using discrete and integrated devices. Topics include discrete and operational amplifier circuits, active filters, waveform generators, power amplifiers, power supplies, regulators and multipliers. Prerequisite: ECE 85.

ECE 151. Microwaves.^e

Cr. 3. An introduction to the principles and applications of microwave devices and circuits. Topics include microwave circuit theory, wave-guiding techniques, components and solid state devices. Prerequisite: ECE 131.

ECE 157. Communication Electronics.^e

7 weeks. 4+0, Cr. 2. A course in the analysis and design of electronic circuits used in the transmission of information by electric signals. Topics include RF amplifiers, oscillators, mixers, modulators, demodulators and coupling circuits. Prerequisite: ECE 140.

ECE 158. Communication Theory.^e

Cr. 3. The effects of system bandwidth and noise on the transmission of information by electrical signals. Topics include amplitude and angle modulation, sampling theorem, pulse code modulation and information measure. Prerequisite: ECE 111.

ECE 160. Microprocessor Applications.^e

Cr. 3. The application of microprocessors in engineering design, emphasizing the interconnection of available components into systems and case studies of existing applications. Prerequisite: ECE 121 or CS 86 and ECE 120 or CS 87.

^eCourses which fulfill electrical engineering elective requirements.

ECE 162. Computer Networks.^e

Cr. 2. Theory of interconnected computer operations, including information flow control by packet and circuit-switching techniques, and standards for communication between network nodes. Prerequisite: ECE 121 or ECE 123.

ECE 170. Power System Engineering.^e

Cr. 3. Power system components, load flow and the control of voltage and energy are studied. System fault studies are related to system protection. Prerequisite: ECE 89.

ECE 175. Control System Design.^e

Cr. 3. Control system identification is accomplished by laboratory measurement techniques and by time and frequency response methods. Compensation methods to achieve specified performance measures of automatic control systems are studied and applied. Optimal control methods are developed for both continuous-time and discrete-time systems. Prerequisite: ECE 111 or ME 181.

ECE 177. Power Electronics.^e

Cr. 2. A course in the application and design of power semiconductor circuits. Topics include rectifiers, AC controllers, choppers, inverters and converters. Prerequisite: ECE 85.

ECE 190. Independent Study Project I.

1+3, Cr. 2. The application of theoretical and experimental engineering concepts and mathematical principles to the analysis, design and laboratory investigation of an engineering system. Individual or group problems in the field of electrical and computer engineering are selected by the student with approval of the faculty. Oral and written reports are required. Prerequisite: senior standing in Electrical Engineering or Computer Engineering.

ECE 191. Independent Study Project II.

1+3, Cr. 2. A continuation of the project selected in ECE 190.

ECE 194. Topics in Electrical and Computer Engineering.^e

Cr. 2-3. The investigation of electrical engineering or computer engineering topics of special interest. Prerequisite: consent of the Chair of the Department.

development and manufacture of mechanical components or systems.

These broad categories break down into many sub-specialties. For example, mechanical engineers play an important role in the development of alternate energy sources including solar, wind and geothermal energy, or in improving the design and manufacturing techniques for products ranging from delicate medical instruments to reliable automobiles. Mechanical engineering contributes to almost every aspect of our society.

The Mechanical Engineering graduate is able to apply scientific knowledge and engineering skills in careers as varied as sales and product applications, planning and supervision of manufacturing, designing new products or systems, improving existing products or systems and general company management. Employment opportunities are available in all areas of the economy, including private industry, government service and consulting firms.

Mechanical Engineering

Laboratories. The Mechanical Engineering program contains a significant laboratory component which is closely correlated with lecture courses. There are eight primary laboratory facilities within the Department. All laboratory facilities are available for use in senior independent study projects.

The Mechanical Measurements laboratory is utilized to promote basic instruction in the use of standard measuring equipment, calibration techniques and determination of instrument operating limits.

The Energetics, Heat Transfer, and Gas Dynamics laboratories provide the opportunity to study power sources such as spark ignition and compression ignition engines and investigate the laws governing the conversion and transfer of energy.

The Automatic Control laboratory is used to conduct experiments with actual and simulated process systems and the associated analog and digital components to control these processes.

The Manufacturing and Materials Laboratory complex contains both a state-of-the-art Computer-Aided Design/Computer-Aided Manufacturing

Mechanical Engineering

Professors Kruger, G. Lehmann, Scroggin; Associate Professors Doria, Rose, Schoech, Steffen (Chair); Assistant Professors Ahmadi, Jensen, Saboury.

The field of mechanical engineering includes a wide range of technical activities in the areas of energy conversion, automatic control of engineering processes, and the design,

^eCourses which fulfill electrical engineering elective requirements.

(CAD/CAM) work station as well as standard tool room and production equipment for use in various metal working and production system experiments. The Materials Laboratory utilizes destructive and non-destructive test methods to evaluate the effect of design and fabrication on the structure and mechanical properties of materials.

The Experimental Stress Laboratory is used to apply experimental techniques involving photoelasticity, strain gauges, and brittle coatings to the analysis of load-bearing members or machine parts.

The Vibration and Sound Laboratory is utilized for instruction in the use of mechanical and electrical vibration excitation and measuring devices. This facility also contains equipment to perform sound measurement and analysis studies.

Graduation requirements. In

addition to the courses common to each degree program listed on page 150, the following courses are required to earn the degree of Bachelor of Science in Mechanical Engineering.

ME 24 Drawing Specifications & Conventions	1 Cr.
ME 50 Computer Applications.	2 Cr.
ME 86 Materials Science	3 Cr.
ME 170 Thermodynamics I	3 Cr.
ME 171 Thermodynamics II	2 Cr.
ME 172 Fluid Dynamics	3 Cr.
ME 173 Mechanical Measurements Laboratory	3 Cr.
ME 175 Heat Power Laboratory	1 Cr.
ME 177 Heat Transfer	3 Cr.
ME 180 Mechanisms	3 Cr.
ME 183 Machine Design I	3 Cr.
ME 186 Manufacturing Processes	3 Cr.
ME 190 Independent Study Project I	2 Cr.
ME 191 Independent Study Project II	2 Cr.
CE 103 Mechanics of Materials	3 Cr.
ECE 96 Principles of Electrical Engineering	4 Cr.
GE 187 Engineering Economics	2 Cr.
Physical Education 1-5	1 Cr.
Physical Education 6-49	1 Cr.
Communication 40 Public Speaking	2 Cr.
Mechanical Engineering Electives	12 Cr.
Social Analysis Elective*	3 Cr.
Technical Elective	3 Cr.
Free Elective	3 Cr.
Total	68 Cr.

Total credits required for graduation = 138

Technical Electives. The technical elective requirement may be met with additional courses from Mechanical Engineering, Civil Engineering, Electrical and Computer Engineering, Biology, Chemistry, Mathematics, Computer

Science or Physics. Courses used to fulfill this requirement must be above the introductory level and must be approved by the departmental adviser.

Cooperative Education. Students may request the Department to substitute GE 190 and GE 191 co-op credit hours for ME 190 and ME 191 course credit hours. Students placed after their junior year may request substitutions of GE 191 and two GE 192 credit hours for ME 190 and ME 191 requirements. If the substitutions are approved, the student is required to present an oral report to faculty and peers after the final co-op work experience.

Sophomore Year, Fourth Semester.

ME 24	1 Cr.
ME 50	2 Cr.
ME 86	3 Cr.
ECE 96	4 Cr.
Chemistry 52E	3 Cr.
Mathematics 104	4 Cr.
Total	17 Cr.

Junior Year

Fifth Semester	Cr.	Sixth Semester	Cr.
ME 170	3	ME 175	1
ME 172	3	ME 177	3
ME 173	3	ME 180	3
ME 186	3	ME 183	3
CE 103	3	English 25	4
Communication 40	2	Social Analysis or	
Total	17	ME Elective	3
		Total	17

Senior Year

Seventh Semester	Cr.	Eighth Semester	Cr.
ME 171	2	ME 191	2
ME 190	2	GE 97	4
GE 187	2	Humanities or Social	
Humanities or Social		Science	0-3
Science	0-3	ME Electives	3-9
ME Electives	3-9	Technical, Free or	
Technical or free		Social Analysis	
Elective	0-3	Elective	0-3
Total	18	Total	15

MECHANICAL ENGINEERING**

ME 24. Drawing Specifications and Conventions.

Cr. 1. Through the media of drawing, sketching and computer-assisted drawing, the topics of dimensioning, tolerances, section views, oblique and perspective views, fasteners and interactive computer drawing are considered. Prerequisite: GE 14.

ME 50. Computer Applications.

Cr. 2. A continuation of GE 20 which studies formatted I/O and applies computer programming to mechanical engineering problems. Applications include selected methods of numerical analysis; comparison of selected numerical methods using available application

*Defined on page 30.

**See page 41 for the number of credit hours that may be applied toward a degree in the College of Arts and Sciences.

programs; applications of computer graphics to data representation and analysis; and introduction to CAD programs using computer graphics. Prerequisites: GE 20 and Mathematics 72 or equivalent.

ME 86. Materials Science.

2+3, Cr. 3. A study of structure-property-processing relationships of engineering materials as related to their selection in design and manufacturing processes. Based on an understanding of atomic and crystal structure, the methods of controlling structure and mechanical properties of materials are studied with an emphasis on the strengthening mechanisms. Processes studied include solidification, phase transformation, and mechanical working of metals. A field trip to an industrial facility is arranged. Prerequisites: Chemistry 51E and Mathematics 72 or 75.

ME 105. Experimental Stress Analysis.^m

2.5+1.5, Cr. 3. An introduction to experimental methods for measuring strain and determining stress, including brittle coatings, photoelasticity, resistance strain gages and birefringent coatings. Stress distributions in machine and structural components subjected to various loadings are analyzed both theoretically and experimentally. Given in alternate years. Prerequisite: CE 103.

ME 167. Interactive Computer Graphics.^m

(Also offered as Computer Science 119.) Cr. 3. A study of the fundamentals of interactive computer graphics systems and software. Emphasis is placed on the concept of device-independent graphics, geometric transformation and projections, and methods of creating visual realism. Prerequisites for engineering students: GE 20 and junior classification.

ME 170. Thermodynamics I.

Cr. 3. Topics originally presented in GE 70 are studied in much greater depth. Extensive use is made of the second law in analyzing processes and cycles. Additional topics covered are gas mixtures and the concept of available energy. Prerequisite: GE 70.

ME 171. Thermodynamics II.

Cr. 2. A continuation of ME 170. The study of the combustion of hydrocarbon fuels, processes that take into account real gas behavior and turbomachinery. Prerequisites: ME 170 and Chemistry 51E.

ME 172. Fluid Dynamics.

Cr. 3. The basic conservation equations in control volume form are developed and used in engineering applications of fluid motion. Topics include fluid statics and the dynamics of both compressible and incompressible flows. Prerequisites: GE 94 and 70.

ME 173. Mechanical Measurements Laboratory.

2+3, Cr. 3. A study of fundamental concepts and physical principles involved in the science of measurement. Experiments involving calibration and testing (both static and dynamic) of primary elements, signal amplifiers, transducers and readout devices. Experimentation utilizes both

laboratory and industrial instruments.

Prerequisites: GE 70, ECE 96 and English 5.

ME 175. Heat Power Laboratory.

0+3, Cr. 1. Experimental studies designed to reinforce theory presented in the areas of heat transfer, thermodynamics and fluid mechanics. Experiments deal with topics such as flow and heat transfer mechanisms, refrigeration and internal combustion engines. Prerequisites: ME 172 and 177 (either may be taken concurrently); ME 170.

ME 177. Heat Transfer.

Cr. 3. The fundamentals of heat transfer by conduction, radiation and forced and free convection are developed and applied to engineering problems. Analytical and graphical solutions for heat exchangers are studied. Prerequisite: ME 170 and 172.

ME 179. Heat Power Design.^m

2.5+1.5, Cr. 3. A design-oriented course. Involves the synthesis of heat transfer equipment, heating and air conditioning systems, heat pump applications and hydraulic and pneumatic systems. Prerequisites: ME 170, 172 and 177.

ME 180. Mechanisms.

Cr. 3. Graphical and analytical approaches to kinematic analysis and synthesis of linkages, gears and cams are presented. Linkage topics include displacement, velocity and acceleration analysis along with type, number and dimensional synthesis techniques. Fundamentals of gears and gear trains are investigated. Cam sizing and application of motion programs to cam design are considered. Prerequisites: GE 20, GE 94, and concurrent registration in Mathematics 73 or 77.

ME 181. Automatic Control.^m

2.5+1.5, Cr. 3. Fundamentals of instrumentation and control with particular application to the process industries. System dynamics are analyzed using step, ramp and frequency response techniques. Laboratory experiments involve system stability, controller selection and adjustment, numerical analysis techniques and system sequencing to achieve specific control objectives. Prerequisites: ME 173 and Mathematics 104.

ME 182. Vibrations.^m

2.5+1.5, Cr. 3. Single and multiple degree of freedom systems are analyzed with regard to natural frequencies, free, forced and damped vibrations. Practical aspects of vibration isolation, absorption, damping and noise measurement and reduction are considered. Frequency analysis techniques are presented. Given in alternate years. Prerequisites: Mathematics 104, ME 50, and GE 94.

ME 183. Machine Design I.

2.5+1.5, Cr. 3. The application of specialized topics in mechanics of materials to the design and analysis of machine elements. Topics considered include combined stress, contact stress, stress concentration, fatigue, deflection and theories of failure. Stress principles are

^mCourses which fulfill mechanical engineering elective requirements.

applied to springs, bolts, welded joints and general mechanical elements. Prerequisite: CE 103.

ME 185. Machine Design II.^m

2.5+1.5, Cr. 3. A comprehensive study in the design and analysis of belt and chain drives, gearing, gear trains, antifriction and journal bearings. Shaft critical speeds, dynamic balancing and machine dynamics are considered. Prerequisite: senior standing in Mechanical Engineering.

ME 186. Manufacturing Processes.

2+3, Cr. 3. A study of manufacturing methods including metal cutting, tools, operation planning, materials, fabrication techniques and inspection. Machinability of materials, application of machine tools, welding and numerical control are introduced through lecture and laboratory work. Field trips to industrial facilities are arranged. Prerequisites: ME 24 and 86.

ME 188. Production Operations and Systems.^m

2.5+1.5, Cr. 3. An analysis of production operations including both physical systems which produce goods and services and management systems which provide decisions, information and control data. Course emphasis is placed on group interaction for analysis, synthesis and improvement of individual

operations within the production system. Prerequisite: ME 186.

ME 189. Computer Numerical Control.^m

Cr. 1. Seven weeks course. A study of the manual and computer-assisted part programming of computer-numerically-controlled machine tools. Tooling of numerical control machines is considered. Prerequisite: ME 186.

ME 190. Independent Study Project I.

1+3, Cr. 2. The application of theoretical and experimental engineering concepts and mathematical principles in the analysis, design or investigation of an engineering system. Individual problems in the field of mechanical engineering to be selected by the student with the approval of the Mechanical Engineering faculty. Prerequisite: senior classification in Mechanical Engineering, corequisite: ME 186.

ME 191. Independent Study Project II.

1+3, Cr. 2. A continuation of ME 190.

ME 194. Topics in Mechanical Engineering.^m

7 weeks or semester. Cr. 2-3. The investigation of mechanical engineering topics of special interest. Prerequisite: consent of the Chair of the Department. Offered upon sufficient demand.



^mCourses which fulfill mechanical engineering elective requirements.

COLLEGE OF NURSING



LeBien Hall

Freda S. Scales, Ph.D., Dean

Associate Professors Barlow, Knaub, McCoy, Scales, Sheehan; Assistant Professors C. Bartelt, Brown, Haley, Kowalski, Logothetis, Mostak, Pepa, Russell, Strandmark, Wickert, Yover.

The College offers a four year curriculum leading to the Bachelor of Science in Nursing degree.

The College also admits transfer students and registered nurses who want to earn a baccalaureate degree.

Registered nurses may complete the requirements for the Bachelor of Science in Nursing degree in less than four years. Acceptable transfer credit hours from another college or university and credit by examination may be applied toward required and elective credit hours in the College of Arts and Sciences. Transitional courses, N 54-55, are required for registered nurses. Upon successful completion of N 54-55, registered nurse students may challenge nursing courses through examination.

Purpose and Objectives. The purpose of the College of Nursing is to prepare beginning practitioners of nursing

and to provide an educational base for graduate study. The BSN candidate:

1. Provides comprehensive health care based on nursing theories and research findings in the primary, secondary, and tertiary levels of the health care system.
2. Synthesizes theoretical and empirical knowledge from the sciences and humanities with nursing theory and practice.
3. Assumes the professional role as a care giver, teacher, researcher, leader and lifelong learner.
4. Values man as a holistic being who perpetually interacts with and is influenced by the internal and external environment.
5. Demonstrates use of the appropriate level of decision making for client and nurse within the health care system.

In accordance with the philosophy of Valparaiso University, the faculty of the College believes its responsibility is to foster intellectual, emotional and spiritual growth of the student as an educated person and as a competent professional

nurse. The curriculum, therefore, includes a wide variety of foundation courses in the natural and social sciences and the liberal arts as well as courses that lead to mastery of the principles and practice of nursing. Permeating the curriculum is cultivation of the spirit of the University's Christian tradition in the student's quest for excellence in all areas of personal and professional life.

Graduation Requirements. In order to realize its objectives, the College holds the students to the following requirements:

A. A minimum of 58 credit hours in nursing. The specific requirements are:

N 5*	1 Cr.
N 10* (Social Analysis)	3 Cr.
N 56*	3 Cr.
N 57*	1 Cr.
N 58*	2 Cr.
N 59*	1 Cr.
N 60*	1 Cr.
N 61*	2 Cr.
N 62*	2 Cr.
N 111*	3 Cr.
N 112*	3 Cr.
N 114*	3 Cr.
N 115*	3 Cr.
N 116*	4 Cr.
N 122*	4 Cr.
N 123*	2 Cr.
N 124*	4 Cr.
N 125*	1 Cr.
N 126*	4 Cr.
N 127*	3 Cr.
N 128*	3 Cr.
N 130*	5 Cr.
Total	58 Cr.

B. A minimum of 56 credit hours from the College of Arts and Sciences. The specific requirements are:

Freshman Seminar 5	3 Cr.
English 5	3 Cr.
History 5	3 Cr.
Theology 5	3 Cr.
English 25	4 Cr.
Environmental Studies*	3 Cr.
Theology Level II and III	6 Cr.
Academic Area Studies Option+	3 Cr.
Chemistry 43, 51 or 63*	4 Cr.
Human Biology*	8 Cr.
Biology 110*	4 Cr.
Home Economics 45*	3 Cr.
Psychology 100*	3 Cr.
Psychology 51*	3 Cr.
Psychology 140*	3 Cr.
Total	56 Cr.

C. Electives. In addition to meeting the requirements in Nursing and Arts and

Sciences listed above, the student must present for graduation a sufficient number of electives to bring the total number of credit hours to 126. No more than 6 credits may be baccalaureate nursing credits.

One elective must meet the Academic Area Studies requirement of a three credit hour course in one of the areas listed below:

Fine Arts or Fine Arts—Literature
Foreign Language 20 or 30
Non-Western or Third World Studies
Philosophical and Historical Studies
Social Studies

Note: No more than four credit hours in applied music, including ensemble, and no more than four credit hours of Physical Education 1-49 may be applied toward a degree of Bachelor of Science in Nursing.

D. Requirements for Admission to Nursing Courses. For admission to the first clinical nursing course, students must attain a minimum cumulative grade point average of 2.0 and no grade lower than C— in the courses marked with an asterisk in sections A and B of graduation requirements.

Students are required to present annually evidence of a recent (within the year) physical examination, current immunization (rubeola included), current communicable disease screening (rubella titer, Mantoux test) and current CPR certification or recertification. The College of Nursing does not make arrangements for meeting these requirements.

E. Progression. Students must maintain a minimum cumulative grade point average of 2.0 in all course work and in the nursing major and must receive no grade lower than C— in courses marked with an asterisk in sections A and B of graduation requirements. Students may repeat each nursing course only once and must repeat the course at this University. The Academic Review Committee reviews petitions of students who request a hearing for appeal of the progression policy.

The student who does not receive a passing grade in a Freshman nursing course may progress to the Sophomore

*Courses in which the student is required to earn a grade of C— or better.

+Defined on pages 30-31 of this catalog

nursing courses. The student must successfully repeat the course which was not passed prior to beginning the Junior courses.

The student who does not receive a passing grade in 3 credits or less of the first sequence of Sophomore courses may progress to the second semester Sophomore courses provided that the student has arranged to take the failed course(s) as an independent study concurrent with the second semester courses. The student must successfully repeat all Sophomore course(s) prior to beginning the Junior courses.

The student who does not receive a passing grade in a second semester Sophomore nursing course must successfully repeat the course prior to beginning the Junior courses.

Minor. A Nursing student may declare a minor (including the Liberal Arts Business Minor) in the College of Arts and Sciences, provided that no more than six credit hours of courses required for the Nursing major are used in fulfilling requirements of the minor. The minor is noted on the student's academic record.

Student Nurses Association. All student nurses are invited to membership in the Student Nurses Association.

Sigma Theta Tau. Students who have completed at least one-half of the required Nursing courses and who have demonstrated superior scholastic achievement and evidence of professional leadership potential may be elected to membership in this national honor society of nursing. The Zeta Epsilon Chapter was installed at Valparaiso University in 1982.

SUGGESTED COURSE PROGRAM.

This suggested schedule of courses represents an orderly sequence for those students who plan to meet degree requirements according to this catalog. Students who wish to fulfill degree requirements from previous catalog programs should, in consultation with their adviser, refer to the appropriate catalog.

Freshman Year

First Semester	Cr.	Second Semester	Cr.
Chemistry 43,		Biology 52	4
51, or 63	4	N 10	3
Biology 51	4	Theology 5	3
Psychology 51	3	Freshman Seminar	3
		5	
English 5	3	N 5	1
History 5	3	Elective	3
Total	17		
		Total	17

Sophomore Year

Third Semester	Cr.	Fourth Semester	Cr.
N 56	3	English 25	4
Biology 110	4	Theology II	3
Psychology 140	3	Environmental Studies	3
Home Economics 45	3	N 61	2
N 57	1	N 62	2
N 58	2	N 60	1
N 59	1		
Total	17	Total	15

Junior Year

5th or 6th Sem.	Cr.	5th or 6th Sem.	Cr.
Theology III	3	N 115	3
N 111	3	Psychology 100	3
N 112	3	N 116	4
N 113	3	Area Studies Option	3
Elective	3	Elective	3
Total	15	Total	16

Senior Year

7th or 8th Sem.	Cr.	7th or 8th Sem.	Cr.
N 122	4	N 126	4
N 123	2	N 127	3
N 124	4	N 128	3
N 125	1	N 130	5
Elective	3	Total	15
Total	14		

Grand Total 126

Note: Students are responsible for transportation to and from all clinical agencies and for transportation associated with home visits. The College of Nursing uses a variety of accredited health facilities to provide broad clinical experience for students; consequently, access to a car is necessary in most clinical courses.

N 5. Concepts of Professional Nursing.

Cr. 1. Introduction to theories and concepts of professional nursing.

N 10. U.S. Health Care Systems.

Cr. 3. An overview of health care delivery systems in the United States. The course examines the impact of social and political events on health care systems. Health policy, manpower, financing, federal legislation, role of government in health care and the political process are included. Fulfills social analysis requirement for nursing majors.

N 54. RN-BSN Transition: Theoretical Component.

Cr. 4. Introduces concepts relevant to professional nursing and the philosophy and conceptual framework of baccalaureate nursing education at Valparaiso University. Prerequisite: Registered Nurse status.

N 55. RN-BSN Transition: Clinical Component.

0+12, Cr. 4. Clinical application of concepts relevant to professional nursing. Prerequisite: concurrent enrollment in N 54.

Note: Prerequisites for the following courses are those listed under *Requirements for Admission to Nursing Courses* and at least sophomore standing.

N 56. Interpersonal Skills in Therapeutic Relationships.

Cr. 3. A study of interpersonal skills used in the provision of health care. A skill-oriented approach applied to mental health concepts such as self awareness, communication, stress management, group dynamics, and assertiveness.

N 57. Professional Roles in Nursing.

Cr. 1. Examines the expanding role of the nurse including legal and ethical aspects of professional role definition. Explores a variety of decision-making methodologies used in the practice of nursing such as the nursing process, the teaching-learning process, the research process and the leadership process.

N 58. Physical Assessment.

0+6, Cr. 2. Clinical practice in assessment skills of interview, inspection, palpation, percussion and auscultation of the healthy adult. The focus is on client strengths and variations of normal.

N 59. Pharmacotherapeutics in Nursing.

0+3, Cr. 1. Focuses on mechanisms of drug dissolution, absorption, distribution, biotransformation, excretion, and drug receptor interaction. Provides an overview of drug classifications and basics of dosage calculation in the administration of oral and parenteral medications.

N 60. Instrumental Skills for Nurses.

0+3, Cr. 1. Focuses on psychomotor techniques, equipment, and scientific rationales in the performance of technical nursing procedures.

N 61. Primary Health Care of the Parent, Child, and Adolescent.

1+3, Cr. 2. Focuses on promotion and maintenance of health for the parent, child, and adolescent during the childbearing and childrearing years.

N 62. Primary Health Care of the Adult/Long-lived Adult.

1+3, Cr. 2. Focuses on promotion and maintenance of health for the young, middle and long-lived adult.

Note: Prerequisites for the following courses are N 56, 57, 58, 59, 60, 61, 62 and at least junior standing.

N 111. Family Health Assessment.

Cr. 3. The application of family theories to a systematic study of family health behaviors.

N 112. Secondary Health Care of the Family.

2+3, Cr. 3. Focuses on the nursing care of families in an acute care setting. The course examines responses of the family to childbirth, illness, and hospitalization.

N 114. Secondary Health Care in Psychiatric Nursing.

2+3, Cr. 3. Study and practice in the nursing care of clients with acute psychiatric disorders.

N 115. Research Methods in Nursing.

Cr. 3. A study of scientific research as applied to nursing. An overview of the scientific method, the purpose of research, research problems, and approaches to solving research problems are examined.

N 116. Secondary Health Care of the Adult/Long-lived Adult.

2+6, Cr. 4. Study and practice of the nursing care of young, middle and long-lived adults. The course examines the responses of adults of all ages and their families to health problems and hospitalization.

Note: Prerequisites for the following courses are N 111, 112, 114, 115, 116 and at least senior standing.

N 122. Tertiary Health Care in the Community.

2+6, Cr. 4. A focus on long-term care of clients/families in the community setting.

N 123. Community Health Assessment.

Cr. 2. Application of levels of prevention to the community.

N 124. Tertiary Health Care and the High Risk Client.

2+6, Cr. 4. Focuses on restorative care of high risk clients and their responses to life threatening problems.

N 125. Tertiary Health Care in Psychiatric Nursing.

Cr. 1. Study of the nursing care of clients with chronic psychiatric disorders.

N 126. Nursing Management in a Health Care System.

2+6, Cr. 4. An overview of management theories and roles as applied by a nurse manager in a health care setting.

N 127. Tertiary Health Care in Gerontologic Nursing.

Cr. 3. Study of the nursing care of long-lived clients who have chronic health alterations requiring ongoing therapy and nursing care. This course must be taken concurrently with N 126.

N 128. Tertiary Health Care Issues Related to the Family.

Cr. 3. Focuses on the legal and ethical issues in the nursing care of families with exceptional health problems.

N 130. Professional Role Practicum.

1+12, Cr. 5. Focuses on role transition from student to professional nurse facilitating synthesis of knowledge and experience in a clinical setting of choice. (Must be taken in the final seven weeks of a student's coursework.)

N 132. Topics in Nursing and Health Care.

Cr. 1-3. An open topic course which may cover specialized areas of nursing, current concepts, nursing concerns of delivery of health services. The course may be taken more than once for a maximum of six credit hours provided there is not duplication of topics. Prerequisites: junior or

senior standing, consent of the instructor and the adviser.

N 190. Independent Study in Nursing.

Cr. 1-6. Independent study to be approved by the adviser and the guiding nursing professor. Prerequisite: junior or senior standing in the Nursing major. May be taken on S/U basis with permission of the Dean.

Note: Prerequisites for the following courses are N 100, 102, 103, 104 and 105 and at least senior standing. **The following courses will not be offered after Spring Semester 1986-1987.**

N 106. Leadership and Management in Nursing.

3+9, Cr. 6. An introduction to various organizational and leadership theories and behaviors. Students are assisted to explore and analyze ways to improve client care by applying the processes of leadership and research in a variety of settings.

N 107. Mental Health—Psychiatric Nursing.

3+9, Cr. 6. Major concepts of mental health are explored and principles of nursing intervention are applied in the psychiatric setting utilizing a holistic approach.

N 108. Critical Care Nursing.

3+9, Cr. 6. Focuses on applying the nursing process to give comprehensive care to patients with complex health problems in a critical care setting.

N 109. Community Health Nursing.

3+9, Cr. 6. Focuses on the major concepts of community health and the role of the nurse providing primary health services to families in the community.

N 110. Nursing Issues.

Cr. 2. Focuses on the social, political, economic and religious influences in the nursing profession.



GRADUATE DIVISION



Heritage Hall

**Professor Ferencz P. Kallay,
Ph.D., Acting Director**

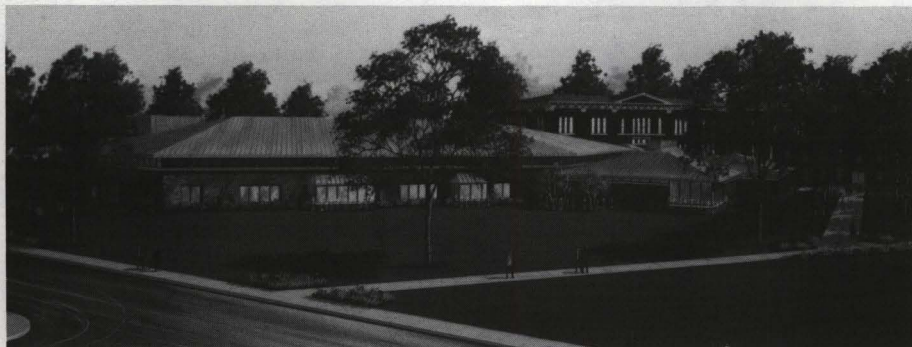
The program of graduate studies was initiated by Valparaiso University in the Summer Session of 1963. It has continued through day and evening courses as well as summer sessions through subsequent academic years.

More than 1500 students have received a master's degree since the inception of this program. As many of these alumni reside in Northern Indiana and teach in the public schools, the University has, through this program, made a major contribution to the life of the larger community in which it lives.

Four degrees are offered: Master of Arts in Applied Behavioral Science (M.A.A.B.S.), Master of Arts in Liberal Studies (M.A.L.S.), Master of Education (M.Ed.), and Master of Music (M.M.). Details concerning the requirements for these degrees can be found in the Graduate Division Bulletin, which may be obtained by visiting or writing the Graduate Division, Valparaiso University.

The graduate programs are under the general supervision of the President and Faculty of the University. Its policies are determined by the Graduate Council. The programs and regulations, as defined by the Council, are administered by the Director of the Graduate Division.

SCHOOL OF LAW



Wesemann Hall

Ivan E. Bodensteiner, J.D., Dean
Bruce G. Berner, LL.M., Associate Dean
Curtis W. Cichowski, J.D., Assistant Dean

Professors R. Baepler, Berner, Bodensteiner, Brietzke, Ehren, Gromley, Hiller, Levinson, A. W. Meyer, Moskowitz, Potts, Stevenson, Stith; Associate Professors Blomquist, Brockington, Myers, Vandercoy; Assistant Professors Albrecht, Kaesebier, Persyn, Straubel, R. Vance, Yonover.

For more than a century, the School of Law of Valparaiso University has sent its graduates into private and corporate practice as well as government service. Many have distinguished careers and have risen to high levels in their profession.

The School was founded in 1879 as the Northern Indiana Law School and became a part of Valparaiso College, now Valparaiso University, in 1905. The School moved into DeMotte Hall in 1926 and into Wesemann Hall in 1963. During the summer of 1986, the School will be moved into a new facility on the western edge of campus.

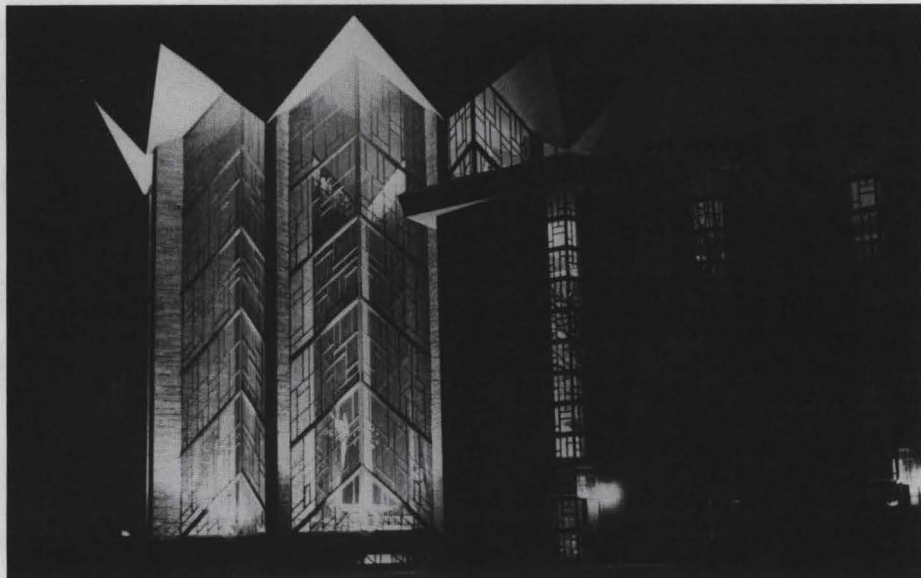
By limiting enrollment, the faculty maintains a context for learning in which the rigors of legal education are experienced in a setting that is supportive. The School seeks a sense of community of individuals with mutual interests working together toward shared objectives. Together with this value, the

School respects each person's individuality and the importance of analytic, conceptual and interpersonal skills in the training of new lawyers. Classes range from small seminars with fewer than ten students, to large classes conducted according to the traditional Socratic method with approximately eighty students. As a law school in a church-related university, it seeks to manifest concern for the total needs of its students and awareness of the problems faced by society and the profession.

The School was approved by the American Bar Association in 1929 and since that time it has been accredited continuously by that Association. In 1930, it was admitted to membership in the Association of American Law Schools. The degree of Juris Doctor, which is granted by the School of Law, is approved by the Board of Regents of the University of the State of New York.

The School offers both the traditional three-year, full-time curriculum and a five-year, part-time program. Detailed information concerning the School's admission policies, costs and curriculum can be found in the *School of Law Bulletin*, which may be obtained at the Office of Law Admissions at the School of Law.

SUMMER SESSION EVENING PROGRAM EXTENSION SERVICE



SUMMER SESSIONS

The University offers two sessions each summer: namely, the Mini Session (three and one-half weeks) and the Regular Summer Session (seven and one-half weeks). The 1986 dates are as follows: Mini Session, May 19 to June 12; Regular Summer Session, June 16 to August 6. These sessions are an integral part of the year-round program of course offerings for both graduate and undergraduate students. They are specifically designed to serve a variety of publics: regular Valparaiso University students accelerating their study, in-service teachers desiring further professional education, visiting students from other colleges earning credit while on summer vacation, high school graduates beginning their college careers early and other interested persons who would like to take course work on a part-time basis toward their degree objectives or simply for personal enrichment.

In the Mini Summer Session students may earn a maximum of four credit hours. In the Regular Summer Session students may earn a maximum of nine credit hours. The combination of the Mini and Regular Summer Session allows a student to earn a total of 13 credit hours during the summer months, which is nearly the equivalent of the amount of credit that can be earned during the fall or spring semesters.

In each session a variety of courses in the morning and in the evening accommodate the working student who wants to take course work while employed fully or part-time. Also, in the Summer Session a few courses are offered as one week workshops and other abbreviated formats.

From time to time, Summer Educational Tours are conducted. Information regarding tours is normally included in the Mini and Summer Session bulletins.

FEES FOR SUMMER SESSIONS, MINI AND REGULAR

Tuition per Credit Hour
(undergraduate) 95.00

Tuition per Credit Hour
(graduate) 110.00

Private Music Lessons (in
addition to tuition) Each
private or class lesson in
applied music 75.00

Courses on the undergraduate and graduate levels are offered in each session in virtually all areas of the College of Arts and Sciences, together with selected undergraduate courses in the College of Business Administration, the College of Engineering, and the College of Nursing.

THE EVENING DIVISION

This program, combining the services of the former extension and adult education programs, was organized in the spring of 1963 to make the offerings of all colleges and departments available to the residents of the greater Valparaiso community, as well as to the full-time students on our campus.

The course offerings are designed to serve the needs of employed adults who desire to work toward a college degree, take courses for self-improvement or qualify for teacher certification. Evening courses are the same in content, objectives and credit hours as corresponding day courses.

The University, through its evening program, does not intend to offer the scope and variety of courses for a student to earn an undergraduate degree by attending *only* in the evening. However, a considerable amount of credit can be earned through evening classes toward an undergraduate degree and all is applicable to that degree when the student matriculates into the day program.

Admission to the Evening Division.

Admission is open to all students who have exhibited the potential to be successful in their academic work at Valparaiso University. Students who have *not* matriculated for a degree in the day undergraduate program and who have *not* been admitted to the undergraduate Evening Division of Valparaiso University

must apply for admission as undergraduate students through the Office of Continuing Education. Students who plan to complete requirements for a degree from Valparaiso University and students who plan to complete the requirements for teacher certification must file an application for admission with the Office of Admissions of the University.

Students who wish to take a graduate course must first be admitted to the Graduate Division. Request for applications should be addressed to the Director of the Graduate Division.

Registration in the Evening

Division. Registration in the Evening Division for those adult students taking evening courses *only* is conducted according to the schedule announced in the brochure published in advance for each semester.

Matriculated undergraduate students may register for up to six credit hours in the Evening Division, provided that their total course load in evening and day courses does not exceed the maximum load permitted (pages 175-176). Any graduate student who registers for a given semester in both day and Evening Division courses is considered to be a day student and is charged the regular fees applicable to a day student.

The Schedule of Classes bulletin lists all courses offered by all departments and colleges of the University in numerical order with evening course sections indicated by "EV."

EXTENSION SERVICES

The University maintains an instructional staff in the Lutheran Medical Center School of Nursing, St. Louis, Missouri, and in the Lutheran Hospital School of Nursing, Ft. Wayne, Indiana. In these schools, as part of cooperative programs, the University teaches certain courses in natural sciences, social sciences, English, and theology. University course work done in these hospital schools of nursing may be used to meet part of the residence requirements of the University, provided that the student meets the University requirements for admission as fully matriculated student.

ADMISSION REGISTRATION ACADEMIC POLICIES



Wehrenberg Hall

Admission

Formal application for admission on a form provided by the Admissions Office may be filed at any time, but should be filed well in advance of the semester in which admission is desired. Each application must be accompanied by an Application Fee of \$20.00 which is non-refundable. Applications for admission to undergraduate programs are to be sent to the Admissions Office. For admission to the School of Law, consult the bulletin of the School of Law. For admission to the Graduate Division, consult the bulletin of the Graduate Division.

General Requirements

Valparaiso University admits those candidates who demonstrate potential for success in rigorous academic work. Qualified applicants are admitted regardless of race, color, sex, national or

ethnic origin, age or physical handicaps. The credentials of each applicant are individually evaluated, with consideration given to academic record, entrance examination scores, character, personality and evidence of motivation for college studies. The University reserves the right to deny admission to any applicant.

To provide uniform predictive norms, the University requires all candidates for admission to the freshman class to take the Scholastic Aptitude Test (SAT) of the College Entrance Examination Board or the ACT Assessment of the American College Testing Program (ACT).

The applicant should be a graduate of an approved secondary school or possess a state high school equivalency certificate. Graduates of non-approved secondary schools, veterans and other non-traditional candidates who may not have completed requirements for high school graduation may be granted admission if their scores on the required entrance examination clearly demonstrate aptitude for college

level studies. Exceptionally well qualified high school students may be admitted before graduation if their candidacy is endorsed by both their high school officials and their parents.

Valparaiso University's curricula offer flexibility and attention to individual talents and needs; therefore, no one specific high school program is required of all applicants. However, a student planning to attend the University should take the strongest possible college preparatory program available. Within these guidelines, individual course selections are best made by the student with the guidance of the high school counselor. A minimum of four years of English, two years of mathematics (algebra and geometry), two years of social studies, two years of laboratory sciences and two years of a foreign language are strongly recommended.

SPECIAL REQUIREMENTS

In addition to the above general requirements, the following colleges have additional specific requirements.

College of Business

Administration: To be successful in the College of Business Administration, students should complete a second year of algebra.

College of Engineering: At least three and one-half years of mathematics including one and one-half years of algebra, one year of geometry and one-half year of trigonometry (business, general or shop mathematics may not be counted); one year of either chemistry or physics with regular laboratory work. These requirements are the minimum; applicants are urged to take four years of formal mathematics and both chemistry and physics.

College of Nursing: The laboratory sciences should include chemistry and biology; a second year of biology is strongly recommended.

Christ College: Admission is by invitation of the Faculty Committee on Christ College, and depends on the candidate's qualities of leadership and scholarship. Christ College scholars have concurrent membership in the College of Arts and Sciences, College

of Business Administration, College of Engineering or College of Nursing.

SPECIAL STUDENT STATUS

An undergraduate applicant who is not admitted as a regularly classified student working toward a baccalaureate degree may be admitted as a special student. Credits received while the student is a special student may be subject to revision should the student later become a candidate for a degree. Registered nurse students and international transfer students are generally admitted with special student status until the appropriate classification can be determined. This status is not available to a student dismissed from the University.

INTERNATIONAL STUDENTS

Valparaiso University welcomes applications from qualified international students. At present, over thirty nations are represented in the University's international student population.

Application and Fee. The completed undergraduate application, together with a check for \$20.00 payable to Valparaiso University, should be returned to the Admissions Office at least three months before the term for which the student is applying. The following items must be received before the Admissions Committee acts on the application:

1. Academic records. Certified, official transcripts (original and English translation) of all secondary and university courses which have been completed or attempted;
2. Proof of English proficiency. Test of English as a Foreign Language (TOEFL) score of at least 550, English Language Score (ELS) level of at least 109 or the equivalent is required for admission. For information on the TOEFL, write to TOEFL, Box 899, Princeton, NJ 08540, U.S.A.;
3. Affidavit of Financial Support. The University is required by the Immigration and Naturalization Service to determine that international applicants have sufficient financial resources to cover all their expenses while in the United States. Therefore, a

notarized statement of this financial support must be submitted;

4. **Health Statement.** A statement from a physician that the applicant is in good health.

Transfer Students. To receive credit for college-level work successfully completed outside the United States, the applicant is charged a fee of \$100.00 for the professional evaluation of that work. This fee must accompany the transcript or certified copy and must be received at least three months before enrollment at Valparaiso University. A syllabus or detailed description of this work should be included.

English Proficiency. In addition to the proof of English proficiency which accompanies the application, Valparaiso University also requires that all international students whose native language is not English take an English proficiency test after arriving on campus. The results of this test are used to place students in the proper English course and to assist advisers with other course selections.

Full-Time Enrollment. All international students who are studying on an F-1 visa are required by the Immigration and Naturalization Service to successfully complete at least 12 credit hours per semester; otherwise, the continuation of study on the F-1 visa is jeopardized and the visa may be revoked. All decisions to withdraw from a course, to take a leave of absence or to transfer to another school should first be discussed with the International Student Adviser.

Tuition. See page 185 in this catalog.

Financial Aid. Valparaiso University does not have financial aid available for international students.

Employment. A very limited number of on-campus jobs are available for international students each year. The Immigration and Naturalization Service does not permit international students to work off-campus.

Health Insurance. Valparaiso University requires that all international students purchase or show that they have health insurance in order to help pay for major medical expenses. The health insurance coverage must be kept active as long as the student is enrolled at the University.

For further information regarding admission of international students, please write to International Student Adviser, Valparaiso University, Valparaiso, IN 46383-9978, U.S.A.

Housing Application

An application for University housing is mailed to each newly admitted student. This application and a deposit of \$150.00 (tuition and housing) should be returned to the Admissions Office as soon as possible. All checks should be made payable to Valparaiso University. A student who occupies a room in a University residence will have \$100.00 credited toward the housing and the remaining \$50.00 toward tuition and fees.

Advanced Standing By Examination

By incorporating four examination programs within its credit-granting structure, Valparaiso University enables students to earn credit and advanced standing for college-level knowledge obtained before enrolling.

Such credit may be earned through satisfactory scores on the Advanced Placement or College Level Examination Program of the College Entrance Examination Board or the International Baccalaureate Program, or through the University's own Placement Program. Credit earned by examination may achieve advanced standing, meet general education requirements, and accelerate progress into advanced areas of study in an intended major or interdisciplinary program. Credit by examination may reduce substantially the time required to earn an undergraduate degree.

ADVANCED PLACEMENT PROGRAM (AP) OF THE CEEB

Applicants for admission who take one or more of the Advanced Placement (AP) Examinations in May will receive credit toward a degree for scores of 5 and 4; in some departments scores of 3 earn credit. AP examinations must be taken before enrollment as a full-time student at Valparaiso University. For more information contact the Admissions Office.

COLLEGE LEVEL EXAMINATION PROGRAM (CLEP) OF THE CEEB

The CLEP program provides an opportunity to gain college credit for those individuals who, through experience, independent study or enriched high school courses, have attained college-level knowledge in a particular field. It is not recommended that these examinations be taken only on the basis of normal high school courses. Information and test center locations can be obtained from College Entrance Examination Board, Box 1822, Princeton, NJ 08541.

Valparaiso University awards credit for CLEP General Examinations in English, Humanities, Social Science-History and Natural Science, subject to the following conditions:

1. The examination must be taken before matriculation at Valparaiso University.
2. Credit for a CLEP General Examination may not be applied to a major nor to any specific course requirement except as listed under 4, 5, 6 and 7.
3. Credit for a CLEP General Examination is valid only if no other credit by examination is awarded in courses applicable in the same area of general education.
4. A score of 500 or above on the English General Examination entitles a student to three credits for English 5.
5. A score of 500 or above on the Humanities General Examination entitles a student to three credits in the area of Fine Arts or Fine Arts-Literature.
6. A score of 500 or above on the Social Science-History General Examination entitles the student to three credits in the area of Social Analysis.
7. A score of 500 or above on the Natural Science General Examination entitles a student to four credits in the area of Natural Science. No credit is awarded in Mathematics for the general examination. A student who applies credits to the general education requirement in Natural Science and Mathematics is expected to complete at least one laboratory course in science.

Valparaiso University awards credit for CLEP Subject Area examinations as indicated in the separate departmental listings. Credit for Subject Area examinations is awarded only if the examination is taken before the student enrolls in a college-level course in the department concerned.

INTERNATIONAL BACCALAUREATE

In addition to recognizing the International Baccalaureate Diploma as a basis for admission to the University, the University will also award college credit or advanced placement or both based on scores earned on the Higher Level Examinations.

UNIVERSITY PLACEMENT TESTING

During the orientation period which precedes each semester, placement tests are offered to incoming students (freshmen and transfers) in the areas listed below. These tests provide an opportunity for students to attain advanced placement, receive credit, or meet certain general education requirements.

Advanced placement and/or credit are awarded in biology, chemistry, foreign languages and mathematics, as explained in the listings for those departments. Full information on AP, CLEP and V.U. Placement can be obtained from the office of the Dean of the College of Arts and Sciences.

Advanced Standing — Transfer Students

The University welcomes transfer students from junior colleges, community colleges and other accredited institutions of higher education. Students planning to transfer to Valparaiso University must apply for admission through the Office of Admissions at least three weeks before the official registration day of the session for which they are applying and must present evidence of honorable dismissal from the institution last attended. A transfer student will not be admitted to Valparaiso University until official transcript(s) and other required credentials are on file in the Office of Admissions. After the applicant's record is evaluated, he will be notified regarding the courses

which are found acceptable for transfer. Courses with grades of D are accepted as credit for graduation provided a grade point average of 2.00 (C) or better is attained on work completed at any one institution, and which has not previously been evaluated. For students in the College of Business Administration, see page 138. For registered nurses in the degree completion program of the College of Nursing see page 162.

Credits earned more than fifteen years before application for admission are accepted toward graduation on a provisional basis, subject to validation by the first thirty semester hours completed in residence at Valparaiso University with a 2.00 (C) average.

Advanced standing is the record of courses and credits accepted by Valparaiso University from another institution.

The maximum number of advanced standing credits that may be transferred to this University is 94 credits (Colleges of Arts and Sciences, Business Administration or Nursing) or 106 credits (College of Engineering).

Credit for workshops, institutes or travel-study ordinarily will be granted only for work taken at Valparaiso University. In cases of exception to this restriction, transfer credit for institutes or workshops usually will not exceed one credit per calendar week of instruction. Transfer credit for travel-study programs usually will not exceed two credits per calendar week.

The following applies to the use of advanced standing in meeting degree requirements within the College of Arts and Sciences:

A. General Education. A Statement of Equivalence is prepared by the Dean of the College of Arts and Sciences in regard to the general education requirements for the Bachelor of Arts degree.

A transfer student may apply a maximum of six credits in theology from his advanced standing to the theology requirement. Otherwise, a transfer student with more than 45 credits but less than 75 credits of advanced standing needs to complete two courses (six credits) of theology at Valparaiso University. A transfer student with 75 credits or more of advanced standing needs to complete one course (three credits) of theology at

Valparaiso University. Students who transfer into the University with 24 or more semester hours of credit are excused from the freshman seminar requirement.

B. Concentration Requirements.

Statements of equivalence for academic majors, interdisciplinary programs or professional block schedules are prepared by the departments concerned.

Registration

All students are expected to register on the official registration days of each semester. For students currently enrolled, a registration period is announced during each semester to file a schedule for the next semester with the Registrar's Office. For freshmen, transfer students and students who have been off campus for at least a semester, a registration period is provided at the beginning of each semester as listed in the University Calendar. (For the registration days and the calendar of the School of Law, consult that School's bulletin.)

HEALTH REQUIREMENT

Every student entering the University for the first time and every student who has not been registered at this University during the previous sixteen month period must submit to the University Medical Center a report of his medical history, physical examination and required immunizations from a licensed physician.

MAXIMUM AND MINIMUM CREDIT HOURS

A full-time student is one who is registered for at least twelve semester credit hours. Maximum credit hours allowed per semester without petition are given in the following table:

Program	Maximum Credit Hours
College of Arts and Sciences	
In all departments except as required in special authorized curricula (e.g., the B.M.E. program and students preparing for licenses in elementary and secondary school teaching)	17
College of Business Administration	
Bachelor of Science in Business Administration	17
Bachelor of Science in Accounting	19
College of Engineering (except in approved block schedules)	20
College of Nursing	17

Students who maintained a grade point average of 3.00 (B) or better during the previous semester may register for extra hours, provided that their formal petitions for such work are granted. Such a petition must bear the signature of the academic adviser and be addressed to the Dean of the appropriate College. Forms are available from the Registrar's Office. Freshmen are not allowed to carry extra hours during the first semester.

COURSE PREREQUISITES

Students are held responsible for meeting the prerequisites of all courses for which they enroll. In unusual cases, a student may petition to waive a prerequisite. Such a petition must bear the signature of the instructor of the course, the student's academic adviser and the Chair of the Department in which the course is offered and be addressed to the Dean of the student's College. Forms are available from the Registrar's Office.

CHANGE OF SCHEDULE

Students may change the status of their registration in courses up to the time of the calendar deadlines published in the University catalog. Such changes are matters of serious consideration. Before deciding on such an action, the student should obtain the counsel of his course instructor, academic adviser and the Chair of the Department in which the course is offered. Forms are available in the Registrar's Office.

Deadlines for course addition, course withdrawal, filing for S/U grade and withdrawal from the University are published in the University Calendar. Once these deadlines have passed, students are held responsible for completion of courses under the terms of the registration they have selected. Changes in registration after these deadlines are allowed only in exceptional cases where the student demonstrates that extreme contributory circumstances have rendered his registration in a course invalid. Serious physical disability, prolonged illness or the death of a loved one: documented occurrences of this kind can be considered reasonable grounds for

requesting an exception to the regular calendar deadlines. A petition for exception to a deadline may be addressed to the Dean of the appropriate College; such a petition must be accompanied by supporting reasons for its presentation. Petition blanks are provided by the Office of the Registrar. The integrity of the Valparaiso University transcript and ultimately of the University itself demand that special exceptions be permitted only when special circumstances prevail. Neither unsatisfactory academic performance, whether caused by inability or lack of application, nor lack of adequate evaluation of a student's performance in a course before the deadline are, in and of themselves, sufficient reason for petition.

A student may officially cancel enrollment in a course during the **first seven class days** without reflection on his permanent record. All requests for adding a course during the **first seven class days** remain at the discretion of the appropriate academic dean or department chair. From then until the published deadline, a student may officially withdraw from a course with a grade of W (withdrawal) on the student's permanent record. Students are not permitted, without an approved petition, to cancel enrollment in courses after the end of the ninth week of a semester. **Not attending class does not constitute formal withdrawal from a course.**

After the drop/add period and until the seventh week of a semester, the tuition fee is prorated according to a schedule which can be viewed in the Office of the Registrar. These rules apply only if students change from full-time to part-time or the reverse, or if part-time students adjust their academic class loads.

APPEALS

Denial of a petition by a student's Dean and/or the appropriate Committee may be appealed to the Subcommittee on Appeals of the Educational Policy Committee. The appealing student should append reasons for submitting his appeal to the Subcommittee.

Academic Policies

GRADING SYSTEM AND QUALITY POINTS*

The course grades reported and recorded in the Registrar's Office are as follows. The corresponding number of quality points per credit hour are also indicated.

Grade		Quality Points/Cr.
A	excellent	4.0
A—		3.7
B+		3.3
B	good	3.0
B—		2.7
C+		2.3
C	satisfactory	2.0
C—		1.7
D+		1.3
D	less than satisfactory, but	1.0
D—	passing	0.7
F	failure	0.0
I	incomplete	—
W	authorized withdrawal	—
S	satisfactory	—
U	unsatisfactory	—

Grades A through D— give credit toward graduation. A student who receives a grade of D— in a course is advised not to enroll in other courses for which the given course is a prerequisite. Candidates for graduation must have a standing of C (2.00 grade point average) or better in all their work at Valparaiso University.

The grade I (incomplete) may, at the discretion of the instructor, be given to a student under the following conditions:

1. The work completed in the course so far is passing (average D- or better).
2. The student has been unable to complete the remaining work in the course because of circumstances beyond his control.

An I (incomplete) received in one semester or summer session must be removed by the beginning of the official examination period of the next succeeding semester or it automatically becomes a grade of F. The student's deadline for submitting the outstanding work to the instructor shall be one week before that date.

Authorized withdrawal from a course or from the University within the published deadlines gives the grade of W to each course withdrawn. This mark carries no credit.

The satisfactory grade, S, is given under the following conditions:

1. The course is designated in this catalog to be graded S/U or the student officially opts or petitions to have the S/U grade in the course.
2. The student's work in the course is satisfactory, of a quality which is comparable to a grade of C— (1.7 quality points per credit hour) or better.

Course credit hours with grades of S count toward graduation but are not counted in computing the student's quality point average.

The unsatisfactory grade, U, is given under the S/U grade option (condition 1 above) when the student's work does not meet the course objectives (condition 2 above). Course credit hours with grades of U do not count toward graduation and are not counted in computing the student's quality point average.

The failing grade, F, is given under any of the following circumstances:

1. Work done in a course is below a minimum standard required for passing.
2. A student fails to complete work to remove a grade of I (incomplete) before the deadline stated above.
3. A student withdraws from a course without filing the necessary form and obtaining the necessary approval.
4. A student withdraws from a course after the published deadline.
5. A student withdraws from the university without giving official notification. F grades are given in all courses thus dropped.

Only in exceptional cases, such as prolonged or serious illness, does the appropriate committee permit a student to withdraw from a course without a grade of F after the deadline for withdrawing from a course with a grade of W. To withdraw from a course requires the filing of the appropriate form with the signatures of the student's academic adviser, the instructor and the Chair of the department of the

*For the School of Law and the Graduate Division, refer to the appropriate bulletin.

course dropped and the Dean of the student's College. Withdrawal from the University requires notification of the Office of the Vice President for Student Affairs. The appropriate form is obtainable from that office.

ADMISSION TO COURSES ON A SATISFACTORY/UNSATISFACTORY BASIS

Certain courses normally result in S/U grades, as noted in the catalog descriptions. Physical Education courses 1-49 have the S/U option which the student may elect by declaring this choice in the usual way. In addition to any of these courses, the student may take one course, normally letter graded (i.e., A to F), each semester on a satisfactory/unsatisfactory basis subject to the following conditions:

- A. Such courses must not be selected from:
 1. The student's major field or fields;
 2. The required courses for any professional degree or pre-professional program, except for liberal arts electives or other courses approved by the Dean of the student's College;
- B. Such registration must be signed by the student's academic adviser;
- C. A decision to elect a course on S/U basis must be made by the end of the fourth full week of the semester for courses of usual length. **After this deadline, the S/U grading basis may not be changed.** This deadline applies proportionately to Mini, Summer Session or seven-week courses.

NOTE: In selection of the S/U option, the student is strongly advised to discuss the implications of that option with his adviser concerning entrance into professional schools.

ADMISSION TO THE COURSE INTENSIFICATION PLAN

A student may propose a special project for earning one extra credit in one liberal arts course in which he is enrolled in a given semester. This opportunity is part of the University's Course

Intensification Plan. The following regulations pertain to this option for a student:

1. The course must be offered in the College of Arts and Sciences.
2. The course must be offered in the Schedule of Classes for three or more credits.
3. The initiative and responsibility for developing a satisfactory proposal lie with the student.
4. The proposal is subject to the approval of the instructor of the course.
5. Approved proposals must be filed in the Registrar's Office during the period specified in the academic calendar.

The Course Intensification Plan is a type of honors work, and under no circumstances should be considered a substitute for regular course work.

ADMISSION TO COURSES AS AN AUDITOR

A regularly classified student may register in a course as an auditor only with the permission of his adviser and the chair of the department which offers the course. An auditor may not be admitted to the final examination and is never granted credit for the course audited. No additional fee is charged when the student pays full tuition. Once in a course as an auditor, the student cannot change the status of his enrollment to get any kind of grade in the course.

CREDIT HOURS

A **credit hour** (abbreviated Cr. in lists of courses) represents one hour of recitation or lecture, or two or more hours of laboratory, each week for one semester. If time outside the laboratory is required to prepare laboratory notes or reports, two hours may be equivalent to one period of class work. Drawing, shop work and other courses demanding no outside preparation require a minimum of three hours for one credit hour. See specific course descriptions for the exact number of hours required.

For short (seven weeks) courses, the time per week per credit hour is twice that for the semester.

REPETITION OF RESIDENT COURSES FOR CREDIT

Unless repetition of a course for credit is permitted as shown in its catalog description, only the credits, grade and quality points received the last time the course is taken by a student at Valparaiso University shall be used in determining credit for graduation and the cumulative grade point average. A grade of W shall be excluded from this policy. The student's transcript shall record all grades, original and repeat.

A student who elects to repeat a course must secure the appropriate signature on the form provided for this purpose before repeating the course. The form is available in the Registrar's Office.

STANDING OF A STUDENT

A student's standing is determined by the ratio of the total number of quality points to the total number of credit hours attempted in all work at Valparaiso University except courses graded S/U. Thus, a student who makes an average mark of C (2.00 quality points per credit hour) throughout the course of 124 semester hours will have 248 quality points, 124 credit hours and a standing of 2.00. The standing for a semester's work is understood to be the ratio of the number of quality points gained to the number of credit hours scheduled. Standing is also referred to as the grade point average.

Note the above exception regarding repetition of a course.

CLASSIFICATION OF A STUDENT

In the College of Arts and Sciences, College of Business Administration and College of Nursing, a student must have 24 semester credits and 48 quality points to be classified as a sophomore; 56 semester credits and 112 quality points to be classified as a junior; 88 semester credits and 176 quality points to be classified as a senior.

In the College of Engineering, a student must have 24 semester credits and 48 quality points to be classified as a sophomore; 60 semester credits and 120 quality points to be classified as a junior; 94 semester credits and 188 quality points to be classified as a senior.

A student in the School of Law should consult that School's bulletin.

SEMESTER GRADE REPORT

Such a report is sent only to the student and only to the address indicated by him on the official biographical form. This report is considered by the University to be a progress report maintained by the University.

CLASSIFICATION OF COURSES

The courses offered by the University are classified as follows:

- Lower division courses, numbered 1-99;
- Upper division courses, numbered 100-199;
- Graduate-undergraduate courses, numbered 200-299;
- Graduate only courses, numbered 300-399.

LEAVE OF ABSENCE— UNDERGRADUATE STUDENTS

At the end of a semester, a student who has completed at least one full semester of work in residence and who is in good academic standing may apply for a leave of absence. This absence requires approval of the academic adviser and the academic dean. The necessary form may be obtained from the Registrar's Office. This student may return to Valparaiso University without formally applying for readmission within a period of two years following the start of the leave of absence. Leaves are not given to students who withdraw from the University during a semester.

All leaves must be requested before the beginning of the semester in which they are to take effect.

READMISSION OF FORMER STUDENTS TO UNDERGRADUATE AND PROFESSIONAL PROGRAMS

A student who has fully matriculated at Valparaiso University and who has interrupted his studies for whatever reason must apply for readmission to the University through the Readmissions Committee. The request for readmission is to be sent to the Registrar. Exceptions are students who took a formal leave of absence under the conditions specified above, and students enrolled in the Deaconess Training Program, who usually

spend one year in in-service training. (Cooperative Program work semesters and off-campus special semesters are considered to be continuation of study, for which students have officially registered.)

Application for readmission must be made at least one week before the registration date of the term in which the student wishes to enroll. Applications will not be accepted after this date.

The student being readmitted must present the necessary information such as records of attendance and grades at other colleges, and a new medical examination report if the student has been out of school during the previous sixteen month period, before action will be taken on his request to be readmitted.

Credit hours earned more than fifteen years before application for readmission (either at Valparaiso University or at another accredited institution) are subject to reevaluation and, if accepted by the appropriate University standing committee, may be subject to validation by the first year's work (30 semester credits) completed in residence with a 2.00 quality point average.

The case of each student applying for readmission is presented to the Readmissions Committee. The Registrar's Office notifies the student of the Committee's decision. Students with outstanding financial obligations to the University are not considered for readmission until these obligations have been paid in full.

ADVANCED STANDING— RESIDENT STUDENTS

Any resident student who has taken academic course work at any other accredited educational institution must request the Registrar of that institution to send an official transcript to the Valparaiso University Registrar's Office, where an evaluation is made for possible acceptance of transfer credits. Courses with grades of D are accepted for graduation, provided that a grade point average of 2.00 or better is attained on work completed at any one institution, and which has not previously been evaluated. Courses in business and economics with grades of D+ or less do not carry transfer credit for students in the College of Business Administration.

Credit for workshops, institutes or travel-study ordinarily is granted only for work taken at Valparaiso University. In cases of exception to the preceding restriction, transfer credit for institutes or workshops will not exceed one credit per calendar week of instruction. Transfer credit for travel-study programs will usually not exceed two credits per calendar week.

Resident students who wish to take courses at other approved schools concurrently with their Valparaiso work should refer to the appropriate paragraph under **Residence Requirements** on page 182..

DECLARATION OF A MINOR IN THE PROFESSIONAL COLLEGES

Students in the professional colleges may be allowed to declare a minor in the College of Arts and Sciences and to have this minor noted on the students' official transcripts. No more than six hours required of the professional program may be used in fulfilling a minor offered by the College of Arts and Sciences.

TRANSFER TO ANOTHER PROGRAM

If a student transfers from one major or interdisciplinary program to another, all requirements of the new specialization must be met. Such a transfer subjects credits previously earned to a reevaluation. In certain cases the change of program may result in some loss of credit (e.g., if a course taken as a general education requirement is superseded by another course required for the new major). Therefore, such transfers may not be made without the written approval of the advisers and deans concerned. Necessary forms may be obtained from the Registrar's Office.

In the case of transfer from one college to another, note well in the requirements for the degrees of the new college any restrictions on credit hours which may be transferred from the former college.

EXAMINATIONS

Written tests and quizzes are given from time to time during the semester at the discretion of the instructor.

A final examination is required in all courses of 3 credit hours or more. Exceptions may be made for such courses as independent study, practica and

internships, performance, studio and activity courses. Final examinations are held at the close of each semester and, for courses of 3 credit hours or more, must be conducted according to a schedule published by the Registrar.

Final examinations in courses of less than three credits are conducted during regularly scheduled class periods.

In order to give students adequate opportunity to prepare for final examinations, no tests may be given in courses of 3 credit hours or more within seven days before the beginning of the examination period.

Exceptions to these policies require the written approval of the Dean of the College in which the course is offered. Exceptions to the schedule are usually approved when a student has three or more examinations scheduled on the same day.

ACADEMIC DEFICIENCY

In the College of Arts and Sciences, College of Business Administration, College of Engineering and College of Nursing, students whose cumulative resident grade point average falls below 2.00 are considered academically deficient. Such students may be denied the privilege of continuing their studies at the University unless they succeed in improving the quality of their academic work to the satisfaction of the faculty during the following semester. Notice of such deficiency appears on the grade report. The Dean of each College establishes procedures to give students who are academically deficient timely warning of their being denied continuation of their studies.

Deficiency warnings are sent to parents and guardians of all undergraduate students in the day program who are less than twenty-one years of age, unless the student who is not a dependent of his parents or guardians notifies his academic dean to the contrary.

For regulations concerning academic deficiency in the School of Law, see that School's bulletin.

Dropped for Low Scholarship.

Whenever, in the judgment of an academic dean, a student who is academically

deficient would benefit from an interruption of his work in a particular college of the University, the dean will notify the student in writing that he has been dropped and will specify:

- the period of time for which he has been dropped;
- the conditions which he must satisfy in order to be readmitted.

ABSENCE FROM CLASS

Every student is expected to attend every one of his classes unless his absence has been approved by the instructor concerned or the appropriate dean. Absence from class is primarily a matter between the student and the instructor of the class. It is the student's responsibility to discuss with his instructor the reason for his absence and to learn what make-up work may be required.

WITHDRAWAL FROM THE UNIVERSITY*

A student who wishes to withdraw from the University for the remainder of a semester or session must apply to the Vice President for Student Affairs before the deadline date for a permit to withdraw (see calendar at front of catalog). Upon return of the permit properly signed to the Registrar's Office, the Registrar authorizes the return of such fees as are refundable. In the case of a student who is less than twenty-one years of age, the parent or guardian is notified of the withdrawal by the Vice President for Student Affairs. If the student withdraws after the seventh week of the semester, he is ordinarily not granted readmission for the following semester, unless extreme contributory circumstances such as severe illness caused the withdrawal.

The term "honorable dismissal" refers to conduct and character only, not to class standing and grades. It is not granted unless the student's conduct and character are such as would entitle him to continue in the University.

A student who withdraws from the University without authorization, or after the published deadline, is not entitled to refunds of any kind and the instructor of each course in which the student is

*For the School of Law, consult that School's bulletin.

enrolled is required to report a final grade of F* to the registrar.

Graduation

RESPONSIBILITY OF THE STUDENT

Every candidate for a degree is personally responsible for meeting all requirements for graduation. No University official or adviser can relieve him of this responsibility.

A student in the undergraduate program of the University may fulfill the requirements for graduation under any catalog issued during his years of attendance, beginning with the year he first entered the University, provided there is no absence of five or more years* between periods of attendance. All requirements in one catalog issue must be met.

A student who returns to the University after an absence of five or more years* may no longer be a candidate for a degree on the basis of the catalog requirements covered by his previous years of attendance, but must fulfill for graduation all the requirements and provisions beginning with the catalog of the year in which he reenters the University. In addition, credits earned at Valparaiso University more than fifteen years before reentry are subject to reevaluation and shall not be accepted toward graduation requirements unless approved by the appropriate Faculty or University Senate Standing Committee.

SECOND DEGREES

In order to receive a second degree, a student must earn at least thirty semester credits and sixty quality points in excess of the total number of semester credits required for the first degree and, in addition, must fulfill all the specific course requirements for the second degree.

Students in the Graduate Division should refer to that Division's bulletin for specific information.

CREDIT AND QUALITY POINT REQUIREMENTS

Candidates for graduation with the Associate in Science degree or a

bachelor's degree must have a standing of 2.00 or more in all their work at Valparaiso University. In addition, candidates for a bachelor's degree must have a standing of 2.00 or more in any major, minor or interdisciplinary program, based on their work at Valparaiso University. Also, candidates for the Associate in Science degree must have a standing of 2.00 in all of their science courses at Valparaiso University. In the computation of the students' standings, grades of D+, D, D- and F are included. Grades of S, U and W are not included.

Candidates for a master's degree or the Juris Doctor degree should consult the appropriate bulletin for the corresponding requirement.

RESIDENCE REQUIREMENTS

Regardless of other degree requirements, candidates for all bachelor's degrees must meet the following requirements in residence at Valparaiso University:

1. At least one-half (a minimum of 15 credit hours in the area of foreign languages) the number of credit hours required for any major, minor or interdisciplinary program;
2. At least three credits in theology;
3. One course designated as University Course for degrees in the College of Arts and Sciences;
4. At least thirty of the last forty credits presented for the degree.

Residence requirements for master's degrees and the Juris Doctor degree may be found in the appropriate bulletins.

Ordinarily, credit is not given for courses taken concurrently at other approved schools or for correspondence courses taken during a student's enrollment at this University. Any exception to this policy must have the approval of the student's academic adviser, the Dean of the appropriate College and the Committee on Academic and Professional Standards. Note that credit for courses taken under one of the International Study Semesters or Special Semester programs described on pages 11-14 apply as taken in residence at this University.

*For the School of Law, consult that School's bulletin.

APPLICATION FOR A DEGREE

A student who wishes to receive his degree at the end of a Fall Semester must make formal application for the degree on a form provided for this purpose by the Registrar's Office not later than the preceding April fifteenth. A student who wishes to receive his degree at the end of a Spring Semester or a Summer Session must make formal application for the degree on a form provided for this purpose by the Registrar's Office not later than the preceding October fifteenth.

A summer session student, not enrolled in the previous academic year, who expects to receive a degree at the end of a Summer Session must make application for the degree at the beginning of that Summer Session.

If, for any reason, a student (except a graduate student) does not meet the requirements for graduation after filing his application, the student must file a new formal application by the beginning of the session in which he then expects to receive his degree.

Candidates for degrees in August or December, who expect to complete requirements in absentia, must be sure that all course work is completed and the session ended by the deadline date set for resident candidates. Official transcripts must be on file in the Registrar's Office no later than ten days after the close of a semester or session. This does not apply to May candidates, as these candidates must be certified before the May Commencement. Further information will be furnished upon request from those candidates completing degree requirements in absentia.

PRESENCE AT COMMENCEMENT

A candidate for graduation at the end of the Spring Semester must be present at commencement in order to receive his degree. Degrees are not conferred in absentia, except on special permission from the President of the University.

A student who completes his work toward a degree at the end of a Fall Semester or of a Summer Session may be granted the degree at that time.

BACHELOR'S DEGREES WITH DISTINCTION

A student who has been in attendance at Valparaiso University at least three years (a minimum of ninety credit hours) and who has maintained a standing of 3.60 in his work at this institution will be graduated **"With High Distinction."** A student who has been in attendance for only two years (a minimum of sixty credit hours) must maintain a standing of 3.80 at this institution to be eligible for this honor.

A student who has been in attendance at Valparaiso University at least three years (a minimum of ninety credit hours) and who has maintained a standing of 3.40 in his work at this institution will be graduated **"With Distinction."** A student who has been in attendance for only two years (a minimum of sixty credit hours) must maintain a standing of 3.60 to be eligible for this honor.

See the bulletin of the School of Law for the Juris Doctor degree with distinction.

HONORS IN SCHOLARSHIP

An undergraduate student (freshman through senior) who achieves a standing of 3.50 in any semester except the last semester before graduation will be awarded honors under the following restrictions:

1. The student received no grades of I or U at the official end of the semester concerned.
2. The student was registered for at least fourteen credit hours of work for that semester on campus in the Colleges of Arts and Sciences, Business Administration or Nursing (thirteen credit hours in the third year of nursing), at least fifteen credit hours in the College of Engineering, or at least twelve credit hours in an International Studies Semester, Special Semester Off-Campus or any other approved cooperating program (pages 11-14).

Graduating senior honors are announced at Commencement and are based on the work of the last two semesters. The standing must be 3.50 cumulatively for the two semesters; restriction 1 above applies, and the total credit hours for both semesters must be at least the cumulative total from restriction two above (i.e., a total of twenty-eight

credit hours on campus in the College of Business Administration, or a total of twenty-six hours for one semester on campus in the College of Arts and Sciences and one Washington Semester, for example).

For honors in scholarship in the School of Law, consult that School's bulletin.

TRANSCRIPTS OF ACADEMIC RECORDS

The Family Educational Rights and Privacy Act of 1974 (Buckley Amendment) provides, in part, that the institution will maintain the confidentiality of student academic records. The University's entire policy may be found in the **Student Handbook**.

No one outside the University shall have access to, nor will the University

disclose any information from, student academic records without the written consent of students, except to persons, organizations or agencies which are permitted to receive such information under the Act.

With regard to transcripts of academic records, the University's policy covering "dependency" determination is to consider all undergraduate students in the day program as "dependent," unless they specifically inform the Registrar's Office in writing at the beginning of each academic year that they consider themselves to be "independent."

Official transcripts of academic records are released only upon the written request of the student.



TUITION AND FEES EXPENSES HOUSING REGULATIONS REFUNDS



Lankenau and Alumni Halls

Tuition and Fees

Undergraduate and Professional Tuition, Full-Time Students

VU COLLEGE OR SCHOOL	EACH SEMESTER	ACADEMIC YEAR (TWO SEMESTERS)
College of Arts and Sciences	\$3,090.00	\$6,180.00
College of Business Administration	3,190.00	6,380.00
College of Engineering	3,340.00	6,680.00
College of Nursing	3,190.00	6,380.00
School of Law	3,675.00	7,350.00

FEES

The general fee for each semester amounts to \$104.00 and includes a

Student Senate Fee of \$31.50. The fee is paid by all full-time students* registered for at least 12 credit hours per semester. The fee is used to defray the cost of the following services: health and hospitalization program, Union and gymnasium building fund requirements and co-curricular activities. The Student Senate Fee is administered, by authorization, as the Student Senate determines.

Laboratory fees are not charged for regular courses. Students enrolling in laboratory courses are financially responsible for breakage or damage to equipment.

Applied Music Fees. The University encourages students to continue applied music instruction by charging modest fees for private lessons. Students pay a fee of

*For the School of Law, see the appropriate bulletin.

\$85.00 per semester per course for instruction in private or class lessons in applied music. There is no additional charge for use of an instrument or practice room.

Students taking private lessons are held responsible for making arrangements with the instructor to complete all lessons during the semester. If the student is unable to complete within the semester the series of lessons for which he was assessed, a report should be made immediately to the Chairman of the Department of Music by the student. The applied music fee is not refundable after the second week of a semester.

Tuition and Fees For Part-Time Day Students, Undergraduate and Professional Programs

Students who register for less than 12 credit hours (10 credit hours in the School of Law) are classified as part-time students. Such students pay a tuition charge of \$270.00 per credit hour except in the School of Law.* This charge does not include the use of facilities of the health service nor participation in the student insurance plan.

Auditors pay \$270.00 per credit hour equivalent.

Tuition and fees for students enrolled **only** in courses in the Evening Division offered by the University are listed in a separate publication. Any student who registers for a given semester in day and Evening Division classes is considered to be a day student and is charged the regular charges applicable for a day student. A day student may not take more than 6 credit hours in the Evening Division program.

Tuition charges for certain special programs for registered nurses sponsored by the College of Nursing may be determined by contacting the Dean, College of Nursing, or the Office of Admissions.

SPECIAL FEES

Application— \$20.00.** This fee is payable at the time of application for admission to the University. It is not refundable.

Readmission— \$5.00. This fee is payable at the time of application for readmission to the University. It is not refundable.

Tuition Deposit— \$50.00. This fee is required of all new students, both resident and commuter.* A refund of \$25.00 is given if a written notice of cancellation is received before July 15 for the fall semester or before December 1 for the spring semester.

Housing Deposit— \$100.00 (\$50.00 for returning students). This fee is required of all students requesting University housing. In case of cancellation, see Refunds on page 189.

Nursing Liability Insurance— variable. In connection with the clinical practice component of the nursing program, all students in the College of Nursing, beginning with the sophomore year, must secure and provide proof of professional and personal liability insurance.

Vehicle Registration— \$10.00. This fee applies to the first registration and covers both semesters of the school year. For either semester of the school year, the first registration fee is \$5.00. For each additional registration, the fee is \$2.00.

Overseas Study, Cambridge, England— \$412.00. This fee is payable by each participant.

Overseas Study, Reutlingen, Germany— \$537.00. This fee is payable by each participant.

Transcript— No charge is made for any transcript issued. No transcript of a student's record is released until the student has met in full all obligations to the University, financial or otherwise.

Late Registration or Confirmation— \$40.00. This fee becomes effective on the first day of classes for fall and spring semesters only. In no case are students who register or confirm late exempted from this fee, unless for valid reasons they have been given written

*For the School of Law, see the appropriate bulletin.

**\$40.00 for the School of Law.

authorization for exemption by the Dean of Men or Dean of Women.

International Student Transfer

Credit Evaluation— \$100.00. This fee is payable by each international student who transfers college level work for credit. The fee is used for the professional evaluation of the work to be transferred. This fee must accompany the transcript or certified copy sent to the Office of Admissions.

PAYEE

Drafts, checks and money orders should be made payable to the **Valparaiso University Association, Inc.**

Expenses

An estimate of normal expenses for a semester in each college is given below.

**College and Category Average Cost
Per Semester**

College of Arts and Sciences

Tuition	\$3090.00
General Fee	104.00
Rent of Room and Board	1215.00
Books and Supplies . . .	175.00
	\$4584.00

College of Business Administration

Tuition	\$3190.00
General Fee	104.00
Rent of Room and Board	1215.00
Books and Supplies . . .	175.00
	\$4684.00

College of Engineering

Tuition	\$3340.00
General Fee	104.00
Rent of Room and Board	1215.00
Books and Supplies . . .	225.00
	\$4884.00

College of Nursing

Tuition	\$3190.00
General Fee	104.00
Rent of Room and Board	1215.00
Books and Supplies . . .	225.00
	\$4734.00

School of Law

Tuition	\$3675.00
General Fee	104.00
Rent of Room and Board	Not applicable
Books and Supplies . . .	250.00
	\$4029.00

Estimated expenses for room and board are based upon a minimum meal plan buy-in of \$565.00 per semester and double occupancy room rent of \$650.00 per semester. A limited number of single rooms may be made available at an additional cost of \$175.00 per semester.

The expenses for each academic year (two semesters) are approximately twice the above semester figures.

Clothing, travel, incidental expenses, fees for applied music lessons and special fees (page 185) are not included in these estimates.

Amounts due the University are payable in full at the time of registration for each semester.

Parents and students are billed approximately three weeks before registration with an invoice containing the estimated charges for the coming semester. Either payment or evidence of participating in an approved education expense payment plan as outlined below must be received in the Student Accounts Office one week before registration. The minor adjustments in the billing required by additional course fees, for example, are detailed in a statement forwarded to parents and students approximately one month after registration. Credits for scholarships, loans, grants, etc., may be deducted in arriving at the balance due before registration.

Amounts to be earned through campus employment may not be deducted, as these are paid during the course of the semester directly to the student through the University's regular payroll procedure.

Each student registering at Valparaiso University assumes responsibility to pay all college-related expenses not covered by financial aid.

Students who withdraw from the University must make arrangements to meet all outstanding financial obligations to the University. Examples of such obligations are tuition and fees, room and board, library fines, health fees, etc. The student's transcript is not released until payment of all obligations has been made.

Each graduating student must pay any remaining financial obligations to the University before graduation.

No degree is conferred upon and no transcript is given for a student whose

account with the University or the Student Senate has not been settled in full.

Loans such as National Direct Student Loans (NDSL) or Valparaiso University Student Loans become due as stated in the promissory note signed by the student. Transcripts are not released to students who fall in arrears on payment of these loans.

EDUCATIONAL EXPENSE PAYMENT PLANS

Parents and students may select one of the following commercial plans for the payment of educational expenses.

1. The Tuition Plan, Donovan Street, Concord, New Hampshire 03301. The Monthly Budget Program offers a low cost method of budgeting educational expenses without going into debt. Annual school costs are divided into equal monthly payments, beginning in early summer and extending into the school year. This is not a loan and carries no interest charge.

The Educational Loan Program allows families to spread payments throughout and beyond the school years, thus reducing the size of the monthly payments. This program provides an unsecured loan, and is tailored for educational needs as disbursements are made only as required, keeping balances at a minimum and reducing finance charges.

2. Education Funds, Inc.— Fund Management, 2700 Sanders Road, Prospect Heights, Illinois 60070. Any amount for University expenses may be budgeted for one year at a time, or on a multi-year contract. The borrower makes ten payments the first year, starting in June, twelve payments in subsequent years. There is no interest charge, only an annual participation fee. The company forwards payments to the University. Life insurance is available in most states to cover the selected plan.

3. Academic Management Services, Inc., 1110 Central Avenue, Pawtucket, Rhode Island 02861. Any amount for University expenses may be budgeted for one year at a time, or on a multi-year contract. The borrower makes ten payments the first year, starting in June, twelve payments in subsequent years. There is no interest charge, only a

participation fee each year which also provides insurance for persons under 65 years of age.

4. Realizing that many parents prefer to pay for educational expenses on a monthly basis, the University participates in the New Insured Tuition Payment Plan. This unique plan combines the services of a bank and an insurance company. The parent makes monthly payments; the Plan pays the school and insures completion of payments if the parent dies or becomes disabled. This program is offered by the Knight Agency of Boston, Massachusetts. For information about the Plan, write to Richard C. Knight Insurance Agency, Inc., New Insured Tuition Payment Plan, 53 Beacon Street, Boston, MA 02108.

Housing Regulations

The University's regulations require all freshmen, sophomores and juniors* to live in University residence halls. Exceptions are made for veterans, those who at the fall registration will be 21 before the next January 1, those living with parents or spouse, and sophomore and junior fraternity men who live in a fraternity house. All sophomore and junior students who return from their fall semester of International Studies or other cooperative off-campus programs are required to live in University operated residence halls during the spring semester.

Senior students may apply to live in University residence halls. Senior, graduate and law students may examine, in person, in the Housing Office a listing of rooms in private homes, apartments and homes for sale or rent. Every landlord whose property is listed has signed a non-discrimination statement. Students desiring such accommodations should plan to visit the campus at least six weeks before the semester of enrollment to inspect the available listings and make arrangements with the individual landlords. The University is not involved in arrangements between students and landlords, except in the event of racial discrimination.

*Class standing is determined by student classification policy, page 179.

Application. An application form for University housing is mailed to each new student with the Permit to Enter form. This application and the \$150.00 deposit (tuition and housing) should be returned to the Office of Admissions as soon as possible. All checks should be made payable to Valparaiso University Association, Inc. A student who occupies a room in a residence hall will have \$50.00 credited to his tuition and fees account.

All returning students who are required to live in University residence halls according to University housing regulations must complete an Upperclass Housing Agreement form and make an advance room deposit of \$50.00 at the **Business Office** on or before the housing deadline date indicated by the Housing Office.

Assignment Policy. New freshman and transfer student assignments are made by the Housing Office in the order in which their Intent to Enroll forms and deposits are received according to space availability.

Returning upperclass student assignments are made by the Housing Office according to student classification. Seniors have first choice, then juniors, then sophomores. In those halls where the number of applicants exceeds the number of spaces available, assignment is made by lottery. All Upperclass Housing Agreements received before the deadline indicated by the Housing Office have equal consideration under this system within the limits of student classification, and if a lottery is necessary, the laws of chance prevail.

The University will endeavor, but cannot guarantee, to assign accommodations according to the preferences indicated by the student.

Any request for a change in residence hall assignment must be submitted in writing and approved by the Housing Office.

The University reserves the right to make changes in residence hall assignments if necessary for the most effective accommodation of the student body.

Refunds-New Students. The Housing Deposit is refunded in full if a written notice of cancellation is received by the Admissions Office on or before May 1 for

the fall semester, or on or before November 1 for the spring semester. One-half of the deposit is refunded if notification of cancellation is received between May 2 and July 15 for fall semester and between November 2 and December 15 for spring semester. No refund will be given if enrollment cancellation notice is given after these respective dates.

Refunds-Returning Students. One-half of the housing deposit is refunded if written notice of cancellation is received by the Housing Office on or before July 1 for the fall semester, or on or before December 1 for the spring semester. No refund is given if cancellation is given after July 1 for fall semester and December 1 for spring semester. The Upper Class Housing Agreement may not be cancelled after July 31 for fall semester and December 31 for spring semester by students not required to live in University housing.

If a student is denied readmission or if the University should be unable to provide housing, the full amount of the deposit will be refunded.

Occupancy. An agreement is entered into by all students who are assigned University housing which makes it mandatory for them to occupy the residence hall space assigned for both semesters of the school year excluding vacation periods. Students are permitted to move out of the residence hall only if they withdraw from the University or graduate.

Roommate. Preferences should be listed on the housing application. Freshmen are notified in July of their roommate assignments. The specific room number in the residence hall is given when the student arrives on campus.

Arrival at the residence hall for new freshmen and new transfer students should coincide with the first day of orientation activities, to be announced later. All students are expected to report immediately to their assigned residence halls when they arrive on campus for specific room assignment. Luggage may be sent a week before the opening of the residence halls.

Furnishings. All rooms in the University residence halls are provided with the necessary basic furniture. Occupants

supply their own bedding, pillows, towels, lamps and throw rugs if desired. Coin-operated washers and driers and ironing boards are also provided within each residence hall. Several laundries and dry cleaning establishments are located adjacent to the campus. Draperies are provided. Further information is available from the Housing Office.

University residence halls are staffed by Resident Directors.

All students residing in University owned residence halls are **financially responsible for damage** to rooms and equipment. Residence Hall Directors report such damage to the Business Office and the student or the parent is billed for the cost of repair or replacement.

DINING FACILITIES

The University operates dining facilities in the Valparaiso Union and selected residence halls for the convenience of the students. Service is available during periods of scheduled classes. When service is not provided in a residence hall, students residing in such halls may participate at a neighboring dining facility.

All students living in resident halls other than Scheele Hall (sorority occupancy) must buy into the a la carte board plan at the set mandatory rate until they have completed six semesters of college attendance.

Transfer students living in residence halls will also be required to take part in the a la carte board plan based on the number of semesters of attendance completed as a full-time student. Participation requirements are mandatory until the completion of six semesters of such attendance.

The rate for 1986-1987 is \$565.00 per semester. Those dollars may be used to purchase food in any of the residence hall dining rooms, Union cafeteria (during designated hours) or campus grocery stores during the semester. All items for sale are individually priced.

Non-mandatory meal plan students, during the 1986-1987 academic year, may

purchase an initial meal plan credit for a minimum of \$250.00. Further purchases may be made in \$25.00 increments.

Refunds

In cases of **formal voluntary withdrawal**^{*} only, tuition, room rent and board in University operated dormitories are refundable. Such refunds are available only during the first seven-week period of each semester, beginning with the first official day of classes, and are made in accordance with the schedule below, based on the day the application to withdraw is submitted to the Registrar's Office. If a student is dismissed, there is no refund due. General, special and laboratory fees are never refunded.

WEEK OF SEMESTER	PERCENTAGE REFUND FOR TUITION & ROOM
1	90%
2	80%
3	70%
4	60%
5	50%
6	40%
7	30%

Board: Unused Meal Plan credit is refundable throughout the semester. The refund amount equals the balance of the unused contract less a \$50.00 administrative fee.

Refunds are made to students unless the University is instructed in writing to remit to parents or guardians. Refunds must be claimed in writing within six months of the close of the semester in which the assessments were made.

If a student or a parent feels that individual circumstances warrant exceptions to this policy, a written request should be submitted to the Vice President for Business Affairs.

^{*}See pages 181-182.

FINANCIAL AID SCHOLARSHIPS LOAN FUNDS



Financial Aid

The financial aid program at Valparaiso University is intended to provide financial assistance to students who, without such aid, would be unable to attend the University. In selecting the students to receive this assistance, the University places primary emphasis on the student's academic achievement, character and future promise. Financial aid consists of scholarships, grants, loans and campus employment, which may be offered to a student singly or in various combinations. The family of a student is expected to make a maximum effort to assist him with college expenses. Assistance awarded by the University should be viewed as supplementary to the effort of the family, and does not exceed the need of the candidate.

METHOD OF APPLICATION

The following procedure should be followed by any student entering the University for the first time who wishes to apply for financial aid:

1. File an Application for Admission with the Office of Admissions. No student may be considered for assistance until his formal application has been approved.
2. Submit a Financial Aid Form to the College Scholarship Service or the American College Listing Service with Valparaiso University listed as an institution to receive a copy and its analysis. This form can be secured from your high school guidance office or by writing to the Office of Financial Aid, Valparaiso University.

The filing of this form should be completed at the time of application for admission or as soon as possible thereafter. The Office of Financial Aid cannot guarantee aid

consideration for students whose Form is filed later than March 1 of the spring before matriculation.

Further details in regard to financial aid may be obtained from the Financial Aid Office.

TYPES OF AWARDS

Presidential Scholarships. High school seniors with outstanding scholastic achievement. May be awarded without regard to financial need. Scholarships range in size from \$500 to \$2500. Usually renewed if yearly grade point average is 3.0 or above.

University Scholarships. Full-time undergraduate students with financial need, who have exhibited excellent scholastic ability. Awards range in size from \$200 to \$2500. Usually renewed if yearly grade point average is 3.0 or above and need is not drastically changed.

University Grants. Full-time undergraduate students with financial need, who may not meet University scholarship selection. Grants range in size from \$200 to \$2500.

Loans. Valparaiso University offers institutional loans as well as several federal loans. Eligibility is determined on the basis of financial need.

Campus Employment. Students are employed on campus in a variety of positions. Selection for employment is primarily based on financial need. However, there are positions available where need is not a factor.

Complete information regarding financial aid programs available at Valparaiso University is compiled in the Financial Aid Brochure.

Renewal. All need-based financial assistance requires the filing of a **Financial Aid Form annually.** Renewal depends on continued need and the availability of funds. In addition, the minimum academic requirement for an academic scholarship is a 3.0 grade point average and for grants-in-aid, a 2.0 grade point average. Academic deficiency precludes a student from receiving financial assistance.

Satisfactory Academic Progress. A student must maintain satisfactory academic progress to be eligible to receive financial aid. Satisfactory academic

progress can be defined as "proceeding toward the successful completion of degree requirements." The standards of academic progress which a Valparaiso University student must meet to remain eligible for financial assistance are as follows:

1. Achievement of a cumulative grade point average of at least 2.0 after two semesters of college work..
2. Completion of a full-time course load (minimum of 12 credit hours per semester).

If a student fails to meet these standards of satisfactory academic progress, he will be placed on Financial Aid Probation for one academic year, but will still be eligible to receive financial assistance during this probationary period. Failure to meet the standards of satisfactory academic progress at the end of the probationary period results in the total loss of all financial aid.

Scholarships

Listed below are the scholarships awarded annually by Valparaiso University. Recipients of the specific scholarships listed below are selected from the total group of applicants who have completed the regular application procedure. By completing this application, a candidate may assume that he will automatically be considered for whichever of these restricted awards he is eligible. If additional information is required of him, he will be contacted after he has filed the standard application for financial aid.

Note: The amount and number of awards given on endowed scholarships varies depending on the earnings of the established fund.

- ▶ **Honorary Citation.** One-time awards to students with no need.
- ▶ **Aid Association for Lutherans Scholarships.** Competitive Nursing, All College, and Lutheran Campus Scholarships.
- ▶ **Mr. and Mrs. Oliver W. (Emma) Allen Scholarship.** Preference to a pre-ministerial student.
- ▶ **Alpha Phi Delta Sorority Scholarship.** Preference to upperclass sorority members.
- ▶ **Anna B. Althans Scholarship.** Preference to a social work major. Annual Award.
- ▶ **Alumni Board Endowed Scholarship (PACT).** Established by members of the 1985 Valparaiso Alumni Board. Designated for sons or daughters of alumnae(i). Financial need not a criterion.

- ▶ **Amoco Foundation, Inc. Scholarship.** Preference to juniors or seniors majoring in mechanical engineering.
- ▶ **John W. Anderson Scholarship.** Preference to College of Nursing students from Northwest Indiana.
- ▶ **Reverend Theodore and Vera Andres Memorial Endowed Scholarship.** Annual award.
- ▶ **Robert Augustine Memorial Endowed Scholarship.** Preference to students from Wisconsin.
- ▶ **Eric Lee Bandick Endowed Scholarship.** This fund was established by Lorenz Bandick in memory of his son, Eric Lee Bandick, to be used as a scholarship/loan fund for needy and worthy engineering students.
- ▶ **Bark Memorial Endowed Scholarship.** Established by Elda M. and Alfred E. Bark in memory of their daughter. Preference to pre-ministerial students.
- ▶ **Mr. and Mrs. Harry G. Barr Endowed Scholarship.** Preference to a student from Arkansas.
- ▶ **Herbert C. Bartelt Endowed Scholarship.** Preference to a senior student who plans to enter the Lutheran Ministry by way of Concordia Seminary in St. Louis, Missouri, or Fort Wayne, Indiana.
- ▶ **Emory and Elsie Bauer Endowed Scholarship.** Awarded to a student who participates in varsity football and baseball.
- ▶ **Dr. and Mrs. Henry Frederick Beckman Endowed Scholarship.** Preference to a student from Indianapolis, Indiana.
- ▶ **Benz Basketball Scholarship.** Preference to member(s) of the University's men's intercollegiate basketball team.
- ▶ **Victor H. Bergmann Endowed Scholarship.** Annual Award.
- ▶ **Charlotte Berns Scholarship.** Preference to a student in the College of Nursing.
- ▶ **Wilfred and Olga Bernthal Scholarship.** Annual award. Established by their son and daughter-in-law, Mr. and Mrs. Harold G. Bernthal.
- ▶ **Inez C. and W. H. Bischel Scholarship.** Varying amounts for needy students.
- ▶ **Charles H. and Elizabeth Blume Endowed Scholarship.** Preference to students from Northwest Indiana.
- ▶ **William F. and Martha Boeger Memorial Scholarship.** Varying amounts for needy students.
- ▶ **Rudolf F. Boening Memorial Scholarship.** Established by the Valparaiso Board of Realtors in memory of past president Rudolf F. Boening. Preference to senior business majors from Porter County, Hobart or Lake Station who have maintained an academic standing of 3.0, regardless of need.
- ▶ **Mrs. Amalie Bokerman Endowed Scholarship.** Preference to a resident of Pennsylvania.
- ▶ **John V. Borgerding Endowed Scholarship.** Preference to a resident of greater Pittsburgh or Pennsylvania.
- ▶ **Mr. and Mrs. Stanley E. Bovim Endowed Scholarship.** Established in their honor on the occasion of their forty-fourth wedding anniversary. Preference to students from Wisconsin.
- ▶ **Otis R. and Elizabeth Bowen Endowed Scholarship.** Annual award.
- ▶ **Professor John Bowman Endowed Scholarship.** Preference to students enrolled in the School of Law.
- ▶ **A. Brandt Company Endowed Scholarship.** Annual award with preference to member(s) of the men's basketball team.
- ▶ **Carl. A. Jr. and Isabelle M. Brauer Endowed Scholarship.** Preference to active member(s) of a Lutheran congregation.
- ▶ **Ruth Brown Memorial Endowed Scholarship (PACT).** Preference to a female student who is a physical education major, field hockey athlete and Lutheran. If there is not qualified applicant of this description, preference to any student whose major is physical education. Financial need not a criterion.
- ▶ **Julius C. Bruechner Endowed Scholarship.** Annual award to any student in need of assistance.
- ▶ **William G. Buchinger Endowed Scholarship.** Preference to students studying engineering.
- ▶ **Luella R. and Herbert P. Buetow Endowed Scholarship.** Preference to student(s) who plan to enter upon a career in the broad service of the Church. The award is made on the basis of academic ability, character, future promise and need for financial assistance.
- ▶ **Olive Cattau Memorial Endowed Scholarship.** Preference to students from Michigan and Western New York. Special consideration to students preparing for full-time service to the Church.
- ▶ **Dr. Eugene J. Chesrow Memorial Endowed Scholarship.** Preference to pre-medical students from Illinois.
- ▶ **John E. Christen Memorial Endowed Scholarship.** Preference to students in the School of Law.
- ▶ **Delma Coovert Memorial Endowed Scholarship Fund.** Awarded annually with preference to student(s) majoring in music.
- ▶ **City Glass Specialty, Incorporated.** Preference to students from Fort Wayne, Indiana.
- ▶ **Emma E. Claus Scholarship.** Preference to students participating in the Christ College program.
- ▶ **Robert F. and Caroline McMillan Collings Endowed Scholarship.** Preference to New England students majoring in either art or speech and drama.
- ▶ **Robert F. Connell Memorial Scholarship.** Preference to students in the School of Law.
- ▶ **Kenneth Bayard Copeland and Todd Cushman Copeland Family Memorial Endowed Scholarship.** Preference to engineering and pre-medical students.
- ▶ **Roy and Gertrude Dallman Scholarship.** Preference to a student from the Shawano, Wisconsin area on the basis of merit or need.
- ▶ **The Phyllis Ann Daly Memorial Scholarship.** Awarded to a deserving individual who otherwise would not have an opportunity to attend the university.
- ▶ **Vinay K. Das Scholarship.** In recognition of academic performance in the Classics; not based on need.
- ▶ **Arthur Vining Davis Endowed Scholarship.** Awarded annually.
- ▶ **Chaplain Edward G. Deffner Memorial Scholarship.** Awarded annually on the basis of merit or need. Preference to students from Wisconsin.
- ▶ **Edwin F. Deicke Endowed Scholarship.** Preference to students from Northern Illinois.
- ▶ **Delta Upsilon Chapter of Eta Sigma Phi Scholarship.** Classics honorary. Awarded annually to promising students who have had at least one year of Greek or Latin at Valparaiso University.
- ▶ **John L. DeVoss Memorial Scholarship.** Preference to third-year law students who are from Adams County or who intend to practice in the Adams County area.

- ▶ **Sophie Doern Endowed Scholarship.** Annual award.
- ▶ **Max E. Dolleck Scholarship.** Preference to Missouri Synod Lutheran student(s).
- ▶ **Donald W. Dopp Memorial Endowed Scholarship.** Established with gifts from members of the Dopp family, preference to Michigan residents, preferably from Macomb County.
- ▶ **Wilbur C. Dopp Memorial Endowed Scholarship.** For employees of Dopp Distributors, Incorporated, or for an employee's son, daughter or grandchild.
- ▶ **Wilbur H. and Marguerite M. Dosland Endowed Scholarship.** Awarded annually on the basis of merit or need with preference to students from Eastern Iowa.
- ▶ **Hugo and Edna Duesenberg Endowed Scholarship.** Established by the family in honor of their parents. Preference to graduates from St. Louis Lutheran high schools.
- ▶ **Dr. and Mrs. Ara V. Dumanian Scholarship.** Annual award.
- ▶ **Rupert and Ruth Dunklau Endowed Scholarship.** Preference to a student from Nebraska.
- ▶ **Reverend Ernest H. Eggers Memorial Endowed Scholarship.** Annual award with preference to students from Texas.
- ▶ **Reverend and Mrs. P. J. (Myrtle E.) Eickstaedt Endowed Scholarship.** Annual award.
- ▶ **Carl and Bertha Elgert Scholarship.** Annual award.
- ▶ **E. Stanley and Calista Enlund Endowed Scholarship.** Preference to Chicagoland area students.
- ▶ **Faith Lutheran Church, Lake Forest, Illinois, Endowed Scholarship (PACT).** Preference to a Lutheran student; then to student from this church, then to student from the Chicago area. Financial need not a criterion.
- ▶ **Robert Elmore Finding Memorial Scholarship.** Preference to engineering students.
- ▶ **First National Bank of Valparaiso Scholarship.** Preference to students from Porter County, Indiana.
- ▶ **Henry W. Flemming Endowed Scholarship.** Preference to students from the Rochester, New York, area.
- ▶ **Herbert J. Foelber Endowed Scholarship.** Annual award.
- ▶ **Edith Schuchardt Forsberg Family Memorial Endowed Scholarship.** Established by Harvey B. Schuchardt. Preference to students from Wisconsin.
- ▶ **Arthur Franke Memorial Endowed Scholarship.** Annual award.
- ▶ **The Paul and Emilie Freitag Endowed Scholarship.** Preference to Lutheran students from New England area.
- ▶ **Leslie F. and Katherine D. Frerking Endowed Scholarship.** Preference to students from the Southeastern United States.
- ▶ **William A. Fuzy Family Endowed Scholarship.** Annual award.
- ▶ **Dr. and Mrs. E. C. Galsterer Endowed Scholarship.** Preference to students from Saginaw Valley, Michigan.
- ▶ **William C. Gast Memorial Endowed Scholarship.** Preference to children of employees of Gast Manufacturing Corporation who have identified themselves as such—with the scholarships going to students majoring in engineering from southwestern Michigan in any year that employee's children do not qualify or are not available.
- ▶ **Grace Lutheran Church, Winter Haven, Florida, Endowed Scholarship (PACT).** Preference to a student from this church; then to a student from Florida or neighboring state. Financial need not a criterion.
- ▶ **Grace Lutheran Church, River Forest, Illinois, Endowed Scholarship (PACT).** Established by Grace Lutheran Church, River Forest, Illinois, awarded annually, preference to a student from this church, then to a student from Illinois or one of its neighboring states. Financial need is not a criterion.
- ▶ **Grace Lutheran Church, Tulsa, Oklahoma, Endowed Scholarship (PACT).** Preference to a student from this church, then to student from Tulsa or Oklahoma, or neighboring state. Financial need not a criterion.
- ▶ **Henry C. and Ura E. Guhl Endowed Scholarship.** Annual award.
- ▶ **Guild Past National Officer's Endowed Scholarship.** Initiated by the Past National Presidents and Executive Directors in the name of all the women who have served as presidents, vice presidents, secretaries, treasurers and executive directors of the Guild. Annual awards with preference to sons or daughters of University Guild members. (This scholarship will not be initiated until it is fully funded.)
- ▶ **Ruth H. Gunther Scholarship and Lecture Fund.** Preference to students studying Greek or Latin.
- ▶ **The Arthur E. Hallerberg Memorial Endowed Scholarship (PACT).** Established by family and others. Preference to student(s) preparing to teach mathematics, then to student in mathematics. This is a merit award and nominations are made by the chairperson of the mathematics department.
- ▶ **The Elsa and Lloyd Halverson Endowed Scholarship.** Annual award.
- ▶ **Clarence and Elsie Hansen Endowed Scholarship.** Annual award.
- ▶ **The Rev. Dr. Oliver R. and Bertha Harms Endowed Scholarship.** Annual award.
- ▶ **The Edward W. Hartman Memorial Endowed Scholarship.** Preference to a Lutheran student who is a graduate of Concordia Lutheran High School in Fort Wayne, Indiana.
- ▶ **The Reverend Harlan Hartner Endowed Scholarship.** Preference to students from the Greater Kansas City area.
- ▶ **Harvey Scholarship.** Preference to a Pre-osteopathic major.
- ▶ **Lilly Hayden Memorial Endowed Scholarship.** Preference to students from Immanuel Lutheran Church, Grand Rapids, Michigan, or other students from that area.
- ▶ **Walther T. F. and Laura M. Heinicke Endowed Scholarship.** Preference to pre-medical student(s), sons or daughters of ministers or teachers of the Lutheran Church Missouri Synod.
- ▶ **Dr. Karl H. Henrichs Endowed Scholarship.** Established in their honor by Mr. and Mrs. Henry J. Moellerling. Preference to Lutheran students.
- ▶ **Herman C. Hesse Endowed Scholarship.** Preference to engineering students. The awardees to be noted as Hesse Scholars.
- ▶ **Mr. and Mrs. Peter Hessler Endowed Scholarship.** Annual award.
- ▶ **The William and Vera Heyne Endowed Bach Scholarship (PACT).** Established by family and friends, awarded annually, preference to a student majoring in church music, then to any student whose major field is music. Financial need is not a criterion.

- ▶ **Charles H. Hickman Endowed Scholarship.** In memory of her husband.
- ▶ **Dee Hildebrandt Memorial Scholarship Fund (PACT).** Established by the Daniel Hildebrandts and Trinity Lutheran Church, Roselle, Illinois. Preference to a transfer student from this church; then to Chicago area or innercity community. Financial need not a criterion.
- ▶ **Mary Hilgemeier Endowed Scholarship.** Preferably a member of Emmaus congregation, Indianapolis, Indiana.
- ▶ **Walter S. Hiltbold Endowed Scholarship.** Annual Award.
- ▶ **Hoepfner, Wagner and Evans Scholarship.** Administered by the School of Law's Financial Aid Committee. Preference to one student from each of the second and third year classes.
- ▶ **Richard J. Hoerger Endowed Scholarship.** Preference to students enrolled in political science courses.
- ▶ **The Harold and Margaret Hoffman Endowed Scholarship.** Preference to a student from the Fox River Valley in Kane and McHenry Counties in Illinois.
- ▶ **Dr. O.C.J. Hoffmann-Dr. A. G. Huegli Endowed Scholarship.** Preference to St. Louis Lutheran High School Graduates, and then to St. Louis area students.
- ▶ **Clara A. Holeman Scholarship.** Preference to students in the fields of chemistry and medicine.
- ▶ **Oscar Homann Endowed Scholarship.** Preference to students from Illinois.
- ▶ **Hope Lutheran Church, Park Forest, Illinois, Endowed Scholarship (PACT).** Preference to a student from this church, then to a student from Illinois or one of its neighboring states. Financial need not a criterion.
- ▶ **Dr. and Mrs. A. G. Huegli Endowed Scholarship for Leadership.** Established in their honor by their children.
- ▶ **A. G. Huegli Southeastern Michigan Endowed Scholarships.** Preference to students from Southeastern Michigan. Recipients are designated "Huegli Scholars."
- ▶ **Joyce Huegli Memorial Endowed Scholarship.** Preference to student(s) in the College of Nursing.
- ▶ **Immanuel Lutheran Church, Grand Rapids, Michigan, Endowed Scholarship (PACT).** Established by Immanuel Lutheran Church of Grand Rapids, Michigan, awarded annually, preference to a student from this church, then to a student from Michigan or one of its neighboring states. Financial need is not a criterion.
- ▶ **Indiana Federal Savings and Loan Association of Valparaiso.** Preference to Porter County, Indiana resident enrolled in the College of Business Administration.
- ▶ **Judge and Mrs. F. A. Jaeckel Memorial Endowed Scholarship.** Annual award.
- ▶ **Richard F. and Martha W. Jeske Endowed Scholarship.** Annual Award.
- ▶ **Edward Jiede, Jr. Endowed Scholarship.** Annual award.
- ▶ **Mr. and Mrs. Emil Jochum.** Scholarships in varying amounts up to full tuition annually for students from Ohio, preferably Cleveland and vicinity.
- ▶ **Kappa Kappa Scholarship.** To a senior girl from Valparaiso High School.
- ▶ **Bud Keller Memorial Endowed Scholarship (PACT).** Established by the Valparaiso University Guild of Orange County, California. Preference to sons and daughters of guild members, or relatives of Bud Keller, then to any Lutheran students from the Orange County geographical area. Financial need not a criterion.
- ▶ **James G. Kemper Foundation Scholarship.** To be awarded to one freshman each year. Candidates must have substantial academic potential and ability, and the maturity, perspective and motivation to undertake summer work experience in a rigorous business environment each of their undergraduate summers.
- ▶ **Walter C. and Elizabeth K. Klug Memorial Endowed Scholarship.** Annual award.
- ▶ **Mr. and Mrs. Edwin H. Koeneman Endowed Scholarship.** Preference to students from Concordia Lutheran High School, Fort Wayne, Indiana.
- ▶ **Erra E. Koenemann (Mrs. Henry F.) Endowed Scholarship.** Preference to students in the College of Nursing.
- ▶ **Herbert H. and Edith A. Koenig Scholarship.** Preference to students from St. Paul's Lutheran Church, Ft. Wayne, Indiana.
- ▶ **George E. Kottyan Memorial Scholarship.** Preference to philosophy student(s).
- ▶ **Jayne Hoffmann Kraegel Memorial Endowed Scholarship.** Preference to students with an interest in journalism.
- ▶ **John W. and Clara A. Krathwohl Endowed Scholarship.** Preference to students from the state of Indiana, especially from the Peru, Indiana area.
- ▶ **Mr. and Mrs. Gilbert W. Krause Athletic Endowed Scholarship.** Established by members of their family on the occasion of their fortieth wedding anniversary. Preference to students with outstanding athletic and academic records.
- ▶ **Reverend Paul G. Krentz Memorial Endowed Scholarship (PACT).** Established by family and Our Savior Lutheran Church, Aurora, Illinois. Preference to a student from this church; then to student from the Fox River Valley or greater Chicago area. Financial need not a criterion.
- ▶ **The Ruth Krentz Endowed Scholarship (PACT).** Established by Our Savior Lutheran Church, Aurora, Illinois, awarded annually, preference to a student from this church, then to a student from the greater Chicago area. Financial need is not a criterion.
- ▶ **William H. Kroeger Endowed Scholarship.** Preference to a resident of Akron, Ohio.
- ▶ **William Henry Kroeger Memorial Endowed Scholarship (PACT).** Preference to a music student. Financial need not a criterion.
- ▶ **Walter H. Kroehnke Scholarship.** Established with gifts from the Reverend and Mrs. Justus P. Kretzmann and other members of their family. Preference to students in the College of Business Administration.
- ▶ **Frederick William Kroencke Memorial Scholarship.** Annual award to upperclass student.
- ▶ **Krueckenberg Family Scholarship.** Awarded annually, on the basis of merit or need, with preference to a student from Wisconsin, preferably from the Clintonville area.
- ▶ **Krumsieg Scholarship-Loan Fund.** This trust is established in memory of Charles J. Krumsieg, Ida F. Krumsieg and Elma Krumsieg Kraft.
- ▶ **Arlene E. Laesch Endowed Scholarship.** Awarded on the basis of academic ability, character, and need. Preference to a Lutheran student.
- ▶ **William F. and Florence R. Laesch Endowed Scholarship.** Awarded on the basis of academic ability, character and need. Preference to a Lutheran student.

- ▶ **Ernest and Adelaide Laetz Endowed Scholarship.** Preference for students from Michigan.
- ▶ **Earl F. Landgrebe Scholarship.**
- ▶ **Erwin A. and Eleanor H. Lange Endowed Scholarship.** Preference for students in accounting or business administration.
- ▶ **Harry and Emma Lange Memorial Endowed Scholarship.** Established by the children and relatives of Harry and Emma Lange, Seymour, Indiana.
- ▶ **Langer Basketball Scholarship.** Preference to a member of the men's intercollegiate basketball team.
- ▶ **Edward and Margaret Larson Endowed Scholarship.** Preference to Northwestern Indiana student.
- ▶ **Tommy Lasorda Endowed Scholarship.** Funded by friends and associates of the long-time Los Angeles Dodgers manager. Preference to member(s) of the men's baseball team.
- ▶ **Richard H. Laube Memorial Endowed Scholarship (PACT).** Preference to a junior Lutheran student in finance, then to any student in the College of Business Administration. Financial need not a criterion.
- ▶ **Charles E. Laue Endowed Scholarship.** Preference to a child or children of employee(s) of the Hamilton Group (Hamilton-Pax, Inc., Dowagiac Manufacturing, and Charles Laue Ltd.) and then to students from Northwest Chicago area.
- ▶ **Blase Lazzara Memorial Endowed Scholarship Fund.** Preference to a member of the football team.
- ▶ **A.J.W. and Elfrieda M. LeBien Endowed Scholarship.** Preference to College of Nursing students.
- ▶ **Phoebe Leeds Memorial Scholarship.** Preference to applicants who are orphaned, adopted and/or foster children.
- ▶ **The George and Floretta Letz, Sr. Endowed Scholarship.** Annual award.
- ▶ **Ernest and Clara M. Lichtfuss Endowed Scholarship.** Annual award.
- ▶ **John A. Liechti Endowed Scholarship.** Annual award.
- ▶ **Nancy Lieneck Memorial Endowed Scholarship.** Preference to a fourth year female student in the area of social work or special education.
- ▶ **Carl F. Lindberg Memorial Scholarship.** Preference to student in elementary education and student in secondary education. Two awards annually.
- ▶ **Mr. and Mrs. Erick Lippert Scholarship.** Annual awards.
- ▶ **David L. Litten Endowed Scholarship.** Preference to students from North Dakota or Wisconsin and majoring in electrical or mechanical engineering.
- ▶ **Scott C. Lohr Endowed Scholarship.** Preference to a member of the men's cross country team.
- ▶ **Mr. and Mrs. Orval M. Lohse Endowed Scholarship.** Preference to students from Kansas.
- ▶ **Lynette and Norman Luekens Endowed Scholarship.** Preference to students from the Greater Cleveland area.
- ▶ **Lutheran Brotherhood.** Junior and senior college scholarships for Lutheran students and Lutheran Brotherhood Members' scholarships.
- ▶ **Lutheran Brotherhood Endowed Scholarship.** Established by Lutheran Brotherhood through its endowed challenge grant program. Restricted to Lutheran students.
- ▶ **Lutheran Deaconess Endowed Scholarship (PACT).** Established by friends and members of the Lutheran Deaconess Association. Preference to a deaconess student nominated by Lutheran Deaconess Association staff, then to a Lutheran student majoring in Theology. Financial need not a criterion.
- ▶ **Lutheran High School Principals' Scholarship.** Awarded to Lutheran high school seniors who are selected by their principals. 1500
- ▶ **Lutheran President's Scholarship.** \$2000.00 scholarships awarded annually in the names of the respective Church body presidents of each of the major Lutheran Church bodies in America.
- ▶ **Walter A. MacNary Memorial Endowed Scholarship.** Annual award.
- ▶ **Orval L. and Maud L. Mains Memorial Endowed Scholarship.** Preference to elementary education major, students of cornet or trumpet, creative writing or speech and drama.
- ▶ **Dr. and Mrs. Max K. Mallon Endowed Scholarship.** Preference to students from the Rochester, Michigan area. (This scholarship will not be initiated until it is fully funded.)
- ▶ **Marowske Endowed Scholarship.** Preference to employees of the Flame Furnace Co. and members of their families. If no qualified applicants are available in a given year, preference to students from the Greater Detroit area.
- ▶ **Dr. and Mrs. E. W. Marquardt Endowed Scholarship.** Annual award.
- ▶ **G. H. Maskus Endowed Scholarships.** Annual award.
- ▶ **Russell H. Matthias Endowed Scholarship.** Established by the Lutheran Brotherhood, Minneapolis, Minnesota. Preference to deserving students enrolled in the School of Law.
- ▶ **May Stone and Sand, Inc. Scholarship.** Preference to a resident of Fort Wayne, Indiana.
- ▶ **Katherine McCallum Endowed Scholarship.** Preference to a worthy student in need of assistance. Must be an American citizen.
- ▶ **James H. McGill Memorial Scholarship.** Children of employees of McGill Manufacturing Company.
- ▶ **Kelly Anne McGill Memorial Endowed Scholarship.** Donated by her parents Michael B. and Susan L. McGill; and Kristin McGill. Preference to a student from the Chicago area who is interested in intercollegiate swimming.
- ▶ **Olga J. McKee Scholarship.** Preference to a student from Ohio.
- ▶ **Vera M. McLeod Memorial Endowed Scholarship Fund.** Preference to students from the Chicagoland area.
- ▶ **Mr. and Mrs. A. A. Meitz Endowed Scholarship.** First preference to a member of Messiah Lutheran Church, Dallas, Texas; second preference to a member of Lutheran Church in the Dallas/Fort Worth area; third preference to a Lutheran student who resides in Texas.
- ▶ **Ernest A. Menzel Endowed Scholarship.** Annual award.
- ▶ **Mr. and Mrs. Dirk Meyer Endowed Scholarship.** Preference to a student from Pekin, Illinois.
- ▶ **Lucille M. Meyer Scholarship.** Preference to a student majoring in music on the basis of merit or need.
- ▶ **Gerhard F. Meyne Endowed Scholarship.** Annual award.
- ▶ **Bertha Miller Memorial Scholarship.** Annual award.
- ▶ **Harvey O. Miller Memorial Scholarship.** Preference to student(s) in the College of Business Administration from the Chicagoland area.

- ▶ **Helen Miller Endowed Scholarship.** Preference to a student from St. Paul Lutheran Church, Napoleon, Ohio.
- ▶ **Henry Miller Scholarship.** Preference to civil engineering students.
- ▶ **Minnesota Merit Award.** Established by Minnesota alumni and friends. Awarded to students from Minnesota with outstanding ability and potential based on scholarship, leadership, character and extracurricular activities. Financial need is not a criterion. Awards are for four years in the amount of \$1000.00 per year.
- ▶ **Dean H. Mitchell Endowed Scholarship.** Preference to a student from Indiana.
- ▶ **Marie Moehring Endowed Nursing Scholarship.** Preference to Lutheran nursing student(s), and based on demonstrated leadership, academic achievement, and financial need.
- ▶ **Henry F. Moellering Endowed Scholarship.** Preference to a resident of Fort Wayne or Allen County, Indiana.
- ▶ **Mr. and Mrs. Henry J. Moellering Endowed Music Scholarship.** Recipients are to be selected on the basis of talent and need.
- ▶ **Dr. and Mrs. Robert C. Moellering, Sr. Endowed Scholarship.** Preference to music majors or engineering students.
- ▶ **Dr. Charles and Florence Montz Endowed Scholarship.** Preference to student(s) in the College of Nursing.
- ▶ **Clara Mueller Endowed Scholarship.** Annual award.
- ▶ **Ewald H. Mueller Scholarship.** Awarded to men and women student athletes on the basis of athletic and academic achievement.
- ▶ **H.F.C. Mueller Endowed Scholarship.** Awards to eligible students who have completed the freshman year, for a maximum of four years, including one seminary year.
- ▶ **An Endowed Music Scholarship (PACT).** Established by Stephen R. Kinder, Anne L. Mangelsdorf, and Fred and David Strieter. Preference to a graduate music student; then to a music student. Financial need not a criterion.
- ▶ **3M Company Scholarships.** Varying amounts for students who are U.S. citizens. Funded by Minnesota Mining and Manufacturing Company of St. Paul, Minnesota.
- ▶ **Mr. and Mrs. Martin J. Nehring Endowed Scholarship.** Preference to a student from Colorado.
- ▶ **Marilyn Niequist Memorial Endowed Scholarship.** Preference to a Porter County or Northwest Indiana junior or senior social work, sociology or psychology major with interest in criminal justice in the juvenile area.
- ▶ **Northern Indiana Bank and Trust Company.** Preference to students from Porter County, Indiana.
- ▶ **Nicholas H. and Marguerite Lilly Noyes Endowed Scholarship Fund.** Authorized by the Board of Directors of Valparaiso University to honor Mr. and Mrs. Noyes, whose generosity makes this scholarship possible. The Noyes Scholars are to be selected on the basis of need, character, personality and leadership. The number of Noyes Scholars and the amount of scholarship is determined each year by the University Scholarship Committee.
- ▶ **Carl and Arnold C. Nuechterlein Endowed Scholarship.** Preference to College of Business Administration students who also agree to take at least one course, if available, on the subject of risk management or insurance.
- ▶ **Joel S. Oberman Basketball Scholarship.** Preference to a member of the basketball team.
- ▶ **Oberst Family Endowed Scholarship.** Annual award.
- ▶ **The Reverend Armin and Evelyn Oldsen Endowed Scholarship.** Annual award.
- ▶ **George S. Olive and Company Scholarship.** Preference to accounting majors.
- ▶ **Helen Mae Olson Memorial Endowed Scholarship.** Annual award.
- ▶ **Walter E. Olson Memorial Scholarship.** Preference to students from the Northern Illinois District.
- ▶ **Dr. Richard Oster Scholarship.** Preference to students from New Orleans, Louisiana.
- ▶ **Pacific Hills Lutheran Church, Omaha, Nebraska, Endowed Scholarship (PACT).** Preference to a student from this church, then to a student from Nebraska or one of its neighboring states. Financial need not a criterion.
- ▶ **Mollie V. Page Endowed Scholarship.** Preference to a member of Bethany Lutheran congregation, Waynesboro, Virginia.
- ▶ **The Pauling Music Endowed Scholarship (PACT).** Established by David S. and Linda A. Pauling. Preference to a Lutheran student majoring in music. Financial need not a criterion.
- ▶ **Professor Charles G. Peller and His Son, John Van Alstyne Peller, Memorial Endowed Scholarship.** To upperclass students in the College of Engineering, preferably civil.
- ▶ **Peters Family West Michigan Endowed Scholarship.** Preference to students from West Michigan.
- ▶ **Gilbert A. Peters Endowed Scholarship.** Established in memory of Gilbert A. Peters by his wife. Preference to accounting students; then nursing students.
- ▶ **Ella Pfeifer Endowed Scholarship.** Awarded annually 'to needy, deserving and ambitious students.'
- ▶ **Phi Mu Alpha Endowed Scholarship (PACT).** Established by members and friends of the Kappa Sigma Chapter of Phi Mu Alpha Sinfonia. Preference to a first year student, or transfer student majoring in music, showing commitment to the study of music, who will contribute significantly to the Valparaiso University Music Department, musically and personally. Nomination by officers of chapter and Music Department chair. Financial need not a criterion.
- ▶ **Hattie Lowe Pierce Endowed Scholarship.** Preference to senior women with a special interest in political science.
- ▶ **Pilgrim Evangelical Lutheran Church of Detroit Memorial Endowed Scholarship.** Preference to students from the Detroit area.
- ▶ **Arthur E. Pohlman Endowed Scholarship.** Annual award.
- ▶ **Pohlman Family Endowed Scholarship.** Preference to students from Western New York.
- ▶ **The Rodney B. Poppe Endowed Scholarship.** Awarded annually to an athlete from McHenry County.
- ▶ **Porter County Doctors' Scholarship.** Preference to students from Porter County who are interested in pre-medical, nursing and medical technology.
- ▶ **Porter Memorial Hospital Guild.** Preference to nursing students from Porter County, Indiana.
- ▶ **Professor Henry W. and Laura M. Prahli Scholarship.** Annual award with preference to

students majoring in English. Based on academic excellence and need.

- ▶ **Mrs. Hazel Predoehl Memorial Endowed Scholarship.** Preference to students from California and Oregon.
- ▶ **Vernon F. and Katherine H. Radde Endowed Scholarship.** Annual award.
- ▶ **Emma and William Rakowsky Memorial Endowed Scholarship.** Annual award.
- ▶ **Elizabeth Raney Endowed Scholarship.** Annual award.
- ▶ **The Reverend and Mrs. Arthur L. Reinke and the Reverend and Mrs. Augustus Reinke Memorial Endowed Scholarship.** Established by Dr. Edgar C. Reinke in honor of his parents and grandparents. Two awards on the basis of academic excellence, not need, one to a student who has completed one year of college Latin and one to a student who has completed one year of college Greek. Renewable if the recipient elects to major in Latin, Greek or Classics.
- ▶ **Mr. and Mrs. Carl Rittberger Scholarship.** Preference to residents of Columbus, Lancaster or Zanesville, Ohio Area or from the state of Ohio.
- ▶ **Waldemar M. Roth Memorial Endowed Scholarship.** Preference to student(s) preparing for full-time Lutheran Church work.
- ▶ **Leona Rotzoll and Elsie Skusa Memorial Endowed Scholarship.** Annual award.
- ▶ **Adele Ruettgers Endowed Scholarship.** Preference to students in the College of Nursing.
- ▶ **August and Helene Ruhe Endowed Scholarship.** Annual award.
- ▶ **Gerhard Salzmann Endowed Scholarship.** Preference to chemistry majors.
- ▶ **Sargent and Lundy Scholarship.** Preference to engineering students from Illinois or states bordering Illinois.
- ▶ **Walter W. Schantz Endowed Scholarship.** Annual awards.
- ▶ **Lee R. Schlender Memorial Endowed Scholarship.** Preference to Lutheran students enrolled in the College of Business Administration.
- ▶ **The Walter E. Schmalz Memorial Endowed Scholarship (PACT).** Annual award, preference to a student of severe economic disadvantage or son or daughter of church worker(s) serving the community from which such students come.
- ▶ **Jane Conway Schmeckpeper Endowed Scholarship.** Preference to engineering students.
- ▶ **Mr. and Mrs. Henry J. Schneider Endowed Scholarship.** Annual award.
- ▶ **The Reverend and Mrs. Walter G. Schultz Endowed Scholarship.** Established in celebration of their fifty years of service in the Lutheran ministry. Preference to needy students with good academic standing who have completed at least one year at Valparaiso University.
- ▶ **Andrew and Margaret Schulze Student Support Fund.** Preference to students of severe economic disadvantage, particularly students from foreign countries, or sons and daughters of church workers serving communities from which such students come.
- ▶ **Albert F. and Miriam B. Scribner Endowed Scholarship.** Preference to students enrolled in the College of Nursing.
- ▶ **Elmer Seebeck memorial Endowed Scholarship.** Preference to student(s) from the Nebraska area.

- ▶ **Ray and Marie Seegers Family Scholarship.** Annual award on three year rotating cycle—first to students from Northern Indiana, then Northern Illinois, and then from Texas, who is a deserving and qualified student enrolled in the College of Business.
- ▶ **Seuel Endowed Scholarship.** Preference to needy and deserving graduates of Chicago Luther High School-North.
- ▶ **Carl W. and Caroline D. Seyboldt.** Preference to a member of Bethlehem Lutheran Church, Ridgewood, New Jersey.
- ▶ **Louis and Helen Zahn Shales Endowed Scholarship.** Preference to a member of the First Lutheran Church, Boston, Massachusetts.
- ▶ **Mr. and Mrs. Hugh O. Sherbert Endowed Scholarship.** Preference to Lutheran students from Minnesota, preferably to graduates from Lutheran high schools.
- ▶ **Vera L. Sieb Endowed Scholarship.** Annual award.
- ▶ **John F. Sievers Memorial.** Preference to a major in business or mathematics. \$200.00 annually.
- ▶ **Sigma Phi Epsilon Undergraduate Endowed Scholarship.** Annual award.
- ▶ **Sigma Tau Gamma Undergraduate Endowed Scholarship.** Annual award.
- ▶ **Stanley B. Sink Scholarship.** Preference to students from Valparaiso, Indiana.
- ▶ **Byron Smith Memorial.** Preference to students from Porter County, Indiana.
- ▶ **J. Howard Smith Endowed Scholarship.** Given by Harvey W. Smith in honor of his father, J. Howard Smith (Valparaiso University LL.B. 1907; LL.M. (Hon.), 1949; LL.D. (Hon.) 1950).
- ▶ **Carl O. Sohre Memorial Scholarship.** Preference to students from Minnesota.
- ▶ **St. Andrew Lutheran Church Scholarship.** Preference to church vocation students from the northeastern section of the United States, then to any student from the northeast, then to a church vocation student from anywhere in the country.
- ▶ **St. John's Lutheran Church, Long Green, Maryland, Endowed Scholarship (PACT).** Preference to student from this church; then to student from either Maryland, Delaware, Virginia, North Carolina, South Carolina, or the District of Columbia. Financial need not a criterion.
- ▶ **Bertha A. Staede Memorial.** Preference to a music major, resident of Minnesota.
- ▶ **Edward I. P. Staede and Amanda Hall Staede Endowed Scholarship.** Annual awards.
- ▶ **The Reverend Martin Th. Steege Endowed Scholarship.** Preference to pre-ministerial students.
- ▶ **J. L. Stendel Family Memorial Endowed Scholarships.** Preference to Michigan students.
- ▶ **Frederick A. Stendell and Harry E. Stendell Endowed Scholarship.** Annual award.
- ▶ **Paul Stoner Endowed Scholarship.** Established by his sister, Miss Ruth Stoner. Preference to students from Porter County, Indiana.
- ▶ **Mr. and Mrs. Herbert F. Stride Endowed Scholarship.** Preference to pre-law students from Illinois.
- ▶ **The Fred L. and Selma A. Strieter Memorial Endowed Music Scholarship (PACT).** Established by Anne L. Mangelsdorf, Fred Strieter, and David Strieter. Preference to a Lutheran music student, or a student of church music. Financial need not a criterion.

- ▶ **Margaretta Sackville Tangerman Endowed Scholarship.** Preference to a junior or senior social work major.
- ▶ **Mr. and Mrs. Paul E. Tegge Memorial Endowed Scholarship.** Preference to students from the Milwaukee, Wisconsin area.
- ▶ **Lawrence E. Teich Endowed Scholarship.** Preference to chemistry or engineering students.
- ▶ **Louis Thoeming Endowed Scholarship.** Annual award.
- ▶ **John David Thomas Endowed Scholarship.** Preference to a member of the Valparaiso University wrestling team.
- ▶ **Bertha S. Tietjen Endowed Scholarship.** Preference to students from San Francisco, California.
- ▶ **The Rev. Kenneth O. Timm Endowed Scholarship.** Preference to students from Illinois.
- ▶ **Laura E. Traue Endowed Scholarship.** Annual award.
- ▶ **Turk Family Endowed Scholarship.** Preference to students from Porter County, Indiana.
- ▶ **Dr. and Mrs. H. L. Ulbrich Endowed Scholarship.** Annual award.
- ▶ **Urschel Laboratories Scholarship.** Annual award.
- ▶ **William E. Urschel Endowed Scholarship.** Annual awards to students who will be noted as Urschel Scholars.
- ▶ **Valparaiso University Board of Directors Endowed Scholarship (PACT)** Established by Valparaiso University Board of Directors. Financial need not a criterion.
- ▶ **Valparaiso University Guild Endowed Scholarship.** Scholarships awarded annually to sons or daughters of Guild members.
- ▶ **Valparaiso Women's Club Endowed Scholarship.** Annual award.
- ▶ **Ed. L. Voelz Endowed Scholarship.** Preference to a student who is a resident of Bartholomew County, Indiana, and a graduate of St. Peter's Lutheran School.
- ▶ **Theodore H. and Paula Vogel Endowed Scholarship.** Preference to students from the greater St. Louis area.
- ▶ **Henry and Anna Waldschmidt Memorial Scholarship.** Annual award.
- ▶ **F. G. Walker Endowed Scholarship.** Preference to students from Cleveland or Cuyahoga County, Ohio.
- ▶ **David J. Walton Memorial Endowed Scholarship.** Preference to students in engineering.
- ▶ **Philip Wambeganss Memorial.** Preference to students from Allen County, Indiana. \$175.00 annually.
- ▶ **Angus Ward Foreign Service.** To a student with expressed intention to serve as career officer in the Foreign Service of the United States; based on academic standing and need. \$1000.00 annually.
- ▶ **The Fred and Ruth Wehrenberg Endowed Scholarship.** Annual award.
- ▶ **Dr. and Mrs. J. Frederic Wenchel Memorial Endowed Scholarship.** Annual award.
- ▶ **The Walter G. Wendland Endowed Scholarship.** Preference to Lutheran students.
- ▶ **Clara and Spencer Werner Endowed Scholarship.** Preference to pre-legal students or students enrolled in the School of Law.
- ▶ **The Clara and Spencer Werner Endowed Scholarship Fund.** Preference to students with scholastic ability. Financial need is not a criterion.

- ▶ **Janet Wesemann Scholarship-Loan Fund.** Scholarships, grants or loans with preference to law students.
- ▶ **Edith M. Will Endowed Scholarship.** Annual award.
- ▶ **Wisconsin Endowed Merit Award.** Established by Wisconsin alumni and friends. Awarded to students from Wisconsin with outstanding ability and potential based on scholarship, leadership, character and extracurricular activities. Awards are for four years in the amount of \$1500.00 per year.
- ▶ **Charles W. Wolf Memorial Endowed Scholarship.** Preference to a senior student majoring in chemistry.
- ▶ **Matilda E. Wolff Memorial Endowed Scholarship.** Annual award(s).
- ▶ **Ormand C. Yuerhs, Jr. Memorial Scholarship.** Preference to a philosophy major or minor.
- ▶ **Zuehlke Endowed Scholarship.** Preference to student(s) in the humanities.

Loan Funds

- ▶ **National Direct Student Loan Program.** Valparaiso University participates in the National Direct Student Loan Program, and has established a fund consisting of contributions from the government and the University. Details may be obtained from the Office of Financial Aid.
- ▶ **Nursing Student Loan Fund.** The Valparaiso University College of Nursing participates in the Nursing Student Loan Program and has established a fund consisting of contributions from the government and the University. Details may be obtained from the Office of Financial Aid.
- ▶ **American Bar Association Fund for Legal Education.** Provides a yearly allotment of funds to be used by students of the School of Law of Valparaiso University. Information pertaining to qualifications for this fund may be obtained from the Dean of the School of Law.
- ▶ **Donna Francesca-Cesario Chesrow Loan Fund.** Established for the purpose of making small, short-term loans.
- ▶ **Garman Loan Fund.** A loan fund has been established by Benjamin L. Garman to help students who cannot qualify for a scholarship but who must have financial assistance or those with scholarships who need more help. Details may be obtained from the Office of Financial Aid.
- ▶ **Alvinia Louise Marker Loan Fund.** This fund was established for the purpose of making loans to students making satisfactory progress toward a degree.
- ▶ **Phi Alpha Delta Law Fraternity Endowment Fund.** Loans from this fund are available to worthy student members of the fraternity who are in need of such loans to complete their law school education. The maximum amount of such loans is \$500.00. Terms of the loans, which are prescribed by the national governing board of the fraternity, may be obtained from the Dean of the School of Law.
- ▶ **Henry George Poncher Foundation.** Designed to provide a revolving loan fund to be used for making loans to deserving college students who are taking a pre-medical course preparatory to entering medical school and also to students enrolled in medical school studying to become doctors of medicine. Application is to be made on a form available in the office of the Dean of the College of Medicine of the University of

Illinois and in the office of the Vice President for Business Affairs, Valparaiso University. Further information may be secured from either office.

► **Fred Smoke Student Loan Fund.** Administered by the Valparaiso University Alumni Association, this fund was established in January, 1965, and provides funds for loans to students who are residents of Porter County, Indiana. Details may be obtained from the Director of Financial Aid.

► **Myra K. Tate Student Assistance Trust.** Established to provide loan benefits to certain students at Valparaiso University. This trust is administered by the Northern Indiana Bank and Trust Company as Trustee. The Trustee considers applications from engineering, law and pre-medical students who are in the last two years of their schooling at the University. Applications are received on recommendation of the Dean of the appropriate college or the pre-medical adviser and are processed through the Financial Aid Office of the University before being forwarded to the Trustee for consideration. Details may be obtained from the appropriate deans or the appropriate adviser.

► **Valparaiso University Law School Alumni Student Assistance Trust.** Loans available to law students through this trust are awarded by the officers of the trust. Information may be obtained from the Dean of the School of Law.

► **Valparaiso University College of Nursing Student Assistance Charitable Trust.** The trust is administered by Northern Indiana Bank and Trust Company as Trustee. Application should be made to the Dean of the College of Nursing.

► **Nellie Winifred Cheney Overton Memorial Loan Fund.** This fund was established by Mr. William J. Overton as a memorial to Mrs. Overton. The income from the fund is available for loans to students from Lake County, Indiana.

► **Indiana Federation of Clubs Loan Fund (Lucy D. Putnam Loan Fund and Porter County Federation of Women's Clubs Loan Fund).**

► **Mr. and Mrs. August Schoenherr Memorial Loan Fund.** Established by Mr. and Mrs. Leonard Schoenherr of Ludington, Michigan, as a memorial to his parents.

► **Henry Strong Educational Foundation.** Provides loans to qualified upperclassmen under twenty-five years of age.

► **Semester on the United Nations Loan Fund.** This was established by the Valparaiso branch of the American Association of University Women for women students eligible to participate in the United Nations Semester at Drew University. Terms are similar to those of the Washington Semester Program Loan.

► **Mr. and Mrs. Glen Tabor Lawyers Loan Fund.** This fund was established for making loans to students in the School of Law.

► **Mr. and Mrs. Glen Tabor Nursing Loan Fund.** This was established for making loans to students in the College of Nursing.

► **Valparaiso University Association Loan Fund.** A University Loan Fund has been established to help

students who cannot qualify for a scholarship but who must have financial assistance or those with scholarships who need more help. Details may be obtained from the Office of Financial Aid. In addition to funds provided by special appropriation of the Board of Directors, friends of the University who strongly believe in the principle of lending their resources to students in need have contributed to the University Loan Fund. These contributors are: M. E. Dinsmore Memorial, Frank B. Estell, Oscar Homann, Glenn Krabec, Aaron H. Kruse, The Lutheran Ladies Seminary, Anna and Bertha Meyer, Robert Miller Laboratory, Albert and Anna Raether Memorial, Mr. and Mrs. Henry J. Schneider, Mr. Werner Schroeder, Carl and Susan Thompson, Trinity Tool Company.

► **Washington Semester Program Loan Fund.** Only students fully accepted for the Washington Semester Program at the American University are eligible. Loans up to one hundred dollars are given; the student is expected to repay the loan plus a donation to the principal of the fund of twenty-five per cent within five years after leaving the University.

► **Janette G. Wesemann Student Loan Fund.** Established for the purpose of making loans primarily to qualified pre-law and law students, preferably from the State of Illinois, who are in need of financial assistance to continue their education. Loans from this fund are available to students who are making satisfactory progress toward a degree.

► **Betty Rose Wulf Memorial Loan Fund.** Established by her parents, Mr. and Mrs. Walter H. Wulf, to be used by students preparing for church work, such as deaconess training.

LOAN REPAYMENT TERMS

Each of the loan programs contain specific repayment terms and conditions which are a part of the promissory note the student signs upon receipt of the loan fund. Students are responsible for being aware of the various loan provisions and thus should review the terms of the repayment obligation prior to accepting funds under these loan programs.

REHABILITATION GRANTS

Under the provision of Public Law 565, the federal government and the State of Indiana jointly provide funds for scholarship grants-in-aid to students who have a physical or mental impairment which constitutes a vocational handicap. The State Vocational Rehabilitation Division is responsible for the determination of the grants. The grants pay tuition and fees.

UNIVERSITY PERSONNEL



President Schnabel

Full-Time Faculty 1985-1986

William Dallas Adams, M.S.W., Assistant Professor of Social Work; University of Denver (B.A., 1972; M.S.W., 1974)

Rhea Ann Adgate, M.A.L.S., Assistant Professor of Home Economics; Michigan State University (B.S., 1949); Valparaiso University (M.A.L.S., 1973)

Nasser Ahmadi, Ph.D., Assistant Professor of Mechanical Engineering; Tehran University (B.S., 1971; M.S., 1972); Northwestern University (Ph.D., 1982)

James William Albers, Th.D., Professor of Theology; Associate Dean of the College of Arts and Sciences; Concordia Senior College (B.A., 1959); Concordia Seminary, St. Louis (M.Div., 1963; S.T.M., 1964; Th.D., 1972)

Dorothy A. Allen, M.A.T., Instructor in Mathematics and Computer Science; Earlham College (A.B., 1945); University of Notre Dame (M.A.T., 1966)

Norman Robert Amundsen, M.S., Associate Professor of Physical Education; University of Wisconsin (B.S., 1955; M.S., 1967)

Marcella Stefanac Anderson, Ed.D., Associate Professor of Education; Washington University (B.S.Edn., 1952); Temple University (Ed.M., 1961; Ed.D., 1977)

Katharine Herbert Beddon Antommara, Ph.D., Assistant Professor of Home Economics; Assistant Dean of the College of Arts and Sciences; Lake Erie College (B.A., 1958); Massachusetts General Hospital (R.D., 1959); University of Pittsburgh (M.S., 1961; Ph.D., 1980)

Daniel Lee Arkkelin, Ph.D., Associate Professor of Psychology; Bowling Green State University (B.S., 1974; M.A., 1976; Ph.D., 1978)

Larry Robert Baas, Ph.D., Associate Professor of Political Science; University of Wisconsin, Whitewater (B.Ed., 1968); Kent State University (M.A., 1969; Ph.D., 1976)

Richard Paul Baepler, Ph.D., Professor of Theology and Law; Vice President for Academic Affairs; Concordia Seminary, St. Louis (B.A., 1952, M.Div., 1954), Theologische Hochschule, Hamburg; University of Erlangen; The University of Chicago (Ph.D., 1964)

Simone Francoise Baepler, Lic. es L., Assistant Professor of Foreign Languages and Literatures; University of Bordeaux; Lindenwood College; La Sorbonne, Paris (Lic. es L., 1954), The University of Chicago

Richard Lawrence Balkema, Ph.D., Professor of Political Science; Western Michigan University (B.A., 1962; M.A., 1963); Southern Illinois University (Ph.D., 1971)

Eldon William Balko, M.M., Associate Professor of Music; Wisconsin State University (B.S., 1953); Michigan State University (M.M., 1957); University of Wisconsin

Roberta Settle Barlow, R.N., M.S.N.,

Associate Professor of Nursing; University of Maryland (B.S.N., 1957); University of Illinois, Chicago Medical Center (M.S.N., 1974)

Carlene Heidbrink Bartelt, R.N., M.S.,

Assistant Professor of Nursing; Valparaiso University (B.A., 1946; B.S.N., 1972); University of Arizona (M.S., 1980)

Louis Franklin Bartelt, Jr., LL.M., Louis and

Anna Seegers Professor of Law; Valparaiso University (B.A., 1944; J.D., 1947); Yale University (LL.M., 1954); University of Wisconsin

Meredith William Berg, Ph.D., Associate

Professor of History; St. Olaf College (B.A., 1959); Tulane University (M.A., 1962; Ph.D., 1966)

Robert Roland Bergt, M.Div., Professor of

Music; Concordia Seminary, St. Louis (B.A., 1952; M.Div., 1955, S.T.M., 1957); St. Louis Institute of Music; Washington University

¹James A. Bernard, Jr., Ph.D., Associate

Professor of Economics; Manhattan College (B.B.A., 1965); University of Notre Dame (Ph.D., 1972)

Bruce Gilbert Berner, LL.M., Professor of Law;

Associate Dean of the School of Law; Valparaiso University (B.A., 1965; LL.B., 1967); Yale University (LL.M., 1978)

John Paul Bernthal, D.M.A., Assistant

Professor of Music; Valparaiso University (B.M., 1970); Eastman School of Music, University of Rochester (M.M., 1972); University of Illinois (D.M.A., 1982)

Ivan Edward Bodensteiner, J.D., Professor of

Law; Dean of the School of Law; Loras College (B.A., 1965); University of Notre Dame (J.D., 1968)

Rodney John Bohlmann, Ph.D., Associate

Professor of Electrical and Computer Engineering; Valparaiso University (B.S.E.E., 1970); Rice University (M.S., 1971; Ph.D., 1974)

Willis Dolmond Boyd, Ph.D., Professor of

History; University of California, Los Angeles (B.A., 1945; M.A., 1947; Ph.D., 1954)

Richard H. W. Brauer, M.S. in Art Education,

Associate Professor of Art; Institute of Design of Illinois Institute of Technology (B.S. in Visual Design, 1951; M.S. in Art Education, 1960)

Michael Martin Bretting, Ph.D., Assistant

Professor of Physical Education; East Carolina University (B.S., 1975; M.S., 1976); University of Maryland (Ph.D., 1983)

Paul Herman Brietzke, J.D., Ph.D., Professor

of Law, Lake Forest College (B.A., 1962); University of Wisconsin (J.D., 1969); University of London (Ph.D., 1979)

Philipp L. Brockington, Jr., J.D., Associate

Professor of Law; Amherst College (B.A., 1962); Harvard University Law School (J.D., 1965)

Daniel Carl Brockopp, S.T.M., Associate

Professor of Theology; Concordia Theological Seminary, Springfield (B.Th., 1961); Lutheran School of Theology at Chicago (S.T.M., 1966)

Janet Marie Brown, R.N., M.S.N., Assistant

Professor of Nursing; Indiana University (B.S.N., 1969); St. Xavier College (M.S.N., 1983)

Raymond Joseph Buckley, Ph.D., Associate

Professor in the College of Business Administration; Western Michigan University (B.S., 1960; M.B.A., 1969); Northwestern University (Ph.D., 1980)

James W. Burfeind, Ph.D., Assistant Professor

of Sociology; Moorhead State University (B.A., 1975); Portland State University (M.U.S., 1981; Ph.D., 1984)

Edward J. Byrne, Ph.D., Assistant Professor of

English; Brooklyn College (B.A., 1974; M.F.A., 1976); University of Utah (Ph.D., 1983)

James Caristi, Ph.D., Associate Professor of

Mathematics and Computer Science; Florida State University (B.A., 1971); University of Iowa (Ph.D., 1974)

²Lee Arnold Carlson, A.M., M.S., Associate

Professor of Mathematics and Computer Science; DePauw University (A.B., 1961); University of Michigan (A.M., 1962); The University of Chicago (M.S., 1971)

³James Everett Combs, Ph.D., Associate

Professor of Political Science; East Tennessee State University (B.S., 1967); University of Houston (M.A., 1969); University of Missouri (Ph.D., 1973)

Addison Gilbert Cook, Ph.D., Professor of

Chemistry; Wheaton College (B.S., 1955); University of Illinois (Ph.D., 1959)

⁴Paul Noel Cox, LL.M., Professor of Law; Utah

State University (B.S., 1971); University of Utah (J.D., 1974); University of Virginia (LL.M., 1980)

Joel R. Crosmer, Ph.D., Assistant Professor of

Electrical and Computer Engineering; Concordia Senior College (B.A., 1973); South Dakota School of Mines (B.S., 1976; M.S., 1977); Georgia Institute of Technology (Ph.D., 1985)

¹On Sabbatical Leave, Spring Semester

²On Sabbatical Leave

³On Sabbatical Leave, Fall Semester

⁴On leave of absence

Rex Cunningham, M.F.A., Associate Professor of English; Rutgers University (A.B., 1953); State University of Iowa (M.F.A., 1959)

William Herbert Dauberman, P.E., M.S., Professor of Electrical and Computer Engineering; Bucknell University (B.S. in E.E. 1938); University of Pittsburgh; Illinois Institute of Technology (M.S., 1965)

Grayson S. Davis, Ph.D., Assistant Professor of Biology; George Washington University (B.S., 1970); University of Virginia (Ph.D., 1981)

Sarah Glenn DeMaris, Ph.D., Assistant Professor of Foreign Languages and Literatures; University of Illinois (B.A., 1977); Princeton University (M.A., 1980; Ph.D., 1983)

David J. Detmer, M.A., Instructor in Philosophy; Boston University (B.A., 1980); Northwestern University (M.A., 1982)

Michael Louis Doria, Ph.D., Associate Professor of Mechanical Engineering; Case Institute of Technology (B.S., 1961; M.S., 1963); The Johns Hopkins University (Ph.D., 1968)

Lynne A. Douglass, Ph.D., Assistant Professor of Sociology; Indiana University at South Bend (B.A., 1971); University of Notre Dame (M.A., 1975, Ph.D., 1979)

Thomas Arthur Droege, Ph.D., Professor of Theology; Concordia Seminary (B.A., 1953; M.Div., 1956); The University of Chicago (M.A., 1963; Ph.D., 1965)

Richard Dean Dunning, II, M.A., Instructor in Geography; Carthage College (B.A., 1978); Michigan State University (M.A., 1981); University of Wisconsin

Charles A. Ehren, Jr., J.D., Professor of Law; Columbia College, New York (A.B., 1954); Columbia University School of Law (J.D., 1956); University of Pennsylvania Law School

James Frank Ehrenberg, C.P.A., M.S., Associate Professor of Accounting; Valparaiso University (B.A., 1964); Northern Illinois University (M.S., 1966)

Gail McGrew Eifrig, Ph.D., Assistant Professor of English; Valparaiso University (B.A., 1962); Bryn Mawr College (M.A., 1963; Ph.D., 1982)

William Frederick Eifrig, Jr., D.M.A., Professor of Music; Valparaiso University (B.A., 1955); University of Michigan (M.M., 1957; D.M.A., 1962)

Ahmed Sami El-Nagggar, P.E., Ph.D., Professor of Civil Engineering; University of Cairo (B.Sc., 1948); University of California, Berkeley (M.Sc., 1952); Purdue University (Ph.D., 1957)

Bethyne S. Emery, M.M., Assistant Professor of Music; Michigan State University (B.M., 1947; M.M., 1948); University of Michigan (M.M., 1951); Royal Conservatoire de Musique de Bruxelles (Premier Prix, 1957); Royal Conservatoire de Musique de Ghent

Conrad James Engelder, Ph.D., Professor of History; Wayne State University (B.A., 1952); University of Michigan (M.A. [History], 1953; M.A. [Geography], 1957; Ph.D., 1964)

Steven Carl Engerer, Ph.D., Assistant Professor of Chemistry; Michigan State University (B.S., 1975); The University of Chicago (Ph.D., 1982)

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¹⁸On Sabbatical Leave, Spring Semester

¹⁹On Sabbatical Leave, Fall Semester

²⁰On leave of absence

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Dorothy Paulsen Smith, R.N., Ph.D., Vice President for Admissions and Financial Aid with rank of Professor; Whitworth College (B.S., 1955); Western Reserve University (M.S., 1960); Yale University (Ph.D., 1967); Valparaiso University

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²¹On Sabbatical Leave, Spring Semester

²²On Sabbatical Leave, Spring Semester

²³On leave of absence

²⁴On partial leave of absence

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²⁵On Sabbatical Leave, Spring Semester

²⁶On leave of absence, Spring Semester

²⁷On Sabbatical Leave, Spring Semester

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²⁸On Sabbatical Leave, Spring Semester

²⁹On partial leave of absence

Adjunct and Part-Time Faculty, 1985-1986

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Ralph Donald Ayres, M.S., Part-Time Assistant Professor of History

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Merlin Bray, M.A., Part-Time Lecturer in Education

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William A. Warrick, B.S., Part-Time Lecturer in Communication

Donald Hammond Williams, M.Div., Part-Time Lecturer in Theology

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Dion Patrick Wolfe, B.S., Adjunct Instructor in Communication

Janice Lynn Yudt, B.S. in H.E., Part-Time Assistant Professor of Home Economics

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Vera Therese Hahn, Ph.D., Professor Emeritus of Speech and Drama; Stanford University (A.B., 1930; M.A., 1931); Louisiana State University (Ph.D., 1939)

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VALPARAISO UNIVERSITY CAMPUS

NUMERICAL LEGEND

- | | | | |
|----|--|----|---|
| 1 | Heimlich Hall | 36 | Miller Hall |
| 2 | Baldwin Hall | 37 | LeBien Hall — College of Nursing |
| 3 | Heritage Hall | 38 | Linwood Apartments |
| 4 | DeMotte Hall | 39 | Memorial Hall |
| 5 | Moody Laboratory | 40 | Guild Hall, Business and Registrar's Office |
| 6 | Wesemann Hall — School of Law | 41 | Mueller Hall — Christ College |
| 7 | Lembke Hall | 42 | President's Home |
| 8 | Black Cultural Center | 43 | Valparaiso Union |
| 9 | Phi Sigma Epsilon Fraternity | 44 | Book Center |
| 10 | Delta Theta Phi Law Fraternity | 45 | College of Arts and Sciences Center |
| 11 | Lambda Chi Alpha Fraternity | 46 | Center for Diaconal Ministry |
| 12 | Sigma Phi Epsilon Fraternity | 47 | University Health Center |
| 13 | Phi Delta Theta Fraternity | 48 | Brandt Campanile |
| 14 | Phi Kappa Psi Fraternity | 49 | Chapel of the Resurrection |
| 15 | Phi Kappa Alpha Fraternity | 50 | Moellering Library |
| 16 | Speech and Drama Studio | 51 | Scheele Hall — Sorority Complex |
| 17 | Delta Sigma Phi Fraternity | 52 | Lankenau Hall |
| 18 | WVUR and <i>The Torch</i> Offices | 53 | Physical Plant Services/Stockroom |
| 19 | Theta Chi Fraternity | 54 | Student Counseling and Development Center |
| 20 | Sigma Tau Gamma Fraternity | 55 | Neils Science Center |
| 21 | Phi Mu Alpha Sinfonia Music Fraternity | 56 | Alumni Hall |
| 22 | Sigma Pi Fraternity | 57 | Administrative Center |
| 23 | University Park Apartments | 58 | Meier Hall |
| 24 | Dickmeyer Hall | 59 | Brandt Hall |
| 25 | Art-Music Building | 60 | Brandt-Wehrenberg Cafeteria |
| 26 | Kroenke Hall and Theatre | 61 | Wehrenberg Hall |
| 27 | Athletic Recreation Center | 62 | Central Power House |
| 28 | Athletic Equipment House | 63 | Gellersen Center — College of Engineering |
| 29 | Loke Home Economics Center | 64 | Academic Computer-Communications Center |
| 30 | Graland Hall (Public and Alumni Affairs) | 65 | Urschel Hall — College of Business Administration |
| 31 | Guild Center of Admissions/Financial Aid | 66 | Smoke Entrance Tower |
| 32 | Kreinherder Hall | P | Parking |
| 33 | Dau Hall | T | Tennis Courts |
| 34 | Dau-Kreinherder Cafeteria | | |
| 35 | Student Affairs Building | | |



